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Environmental Assessment

Betsey Branch Analysis Area

**Wakulla Ranger District, Apalachicola National Forest
Wakulla County, Florida**

T4S, R4W; T5S, R3W

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SUMMARY

The Forest Service proposes to treat approximately 1,150 acres of southern pine forestland in Compartment 310 and related areas within the Wakulla Ranger District of the Apalachicola National Forest. The proposed actions would consist of thinnings, clearcuts, uneven-aged group selections, herbicide applications to release pine seedlings, herbicide applications for site prep, planting longleaf seedlings, repair soil erosion, constructing firebreaks, rehabilitating plowed lines, designating a helispot, removing an unapproved bridge, decommissioning a road, and designating a firewood area. Actions connected to the proposal would include landline maintenance, road maintenance and reconstruction.

The project area is located northeast of the Smith Creek Community in several sections of Township 4 South (T4S), Range 4 West (R4W) and Township 5 South (T5S), Range 3 West (R3W), Wakulla County, Florida.

This action is needed to improve forest health and sustainability, TES (threatened, endangered, and sensitive) species habitat, wildland urban interface, soil productivity, public safety for forest users. The proposed action would implement the Revised Land and Resource Management Plan (Forest Plan) for the *National Forests in Florida* by moving toward the future desired condition that is described for the management area.

In addition to the proposed action (Alternative A), the Forest Service also evaluated the following alternative(s):

- *Prescribed Burn (Alternative B) – in which prescribe burn would replace the herbicide applications in the proposed action; all other treatments would remain the same*
- *No Action (Alternative C) – in which on-going forest management activities would continue.*

Based upon the effects of the alternatives, the responsible official will decide whether or not to improve the national forest ecosystem by changing the forest stand structure to sustain a healthy forest, mimic the preferred habitat for the TES species, reduce soil and water degradation, provide for public safety, and to implement the forest plan within the Betsey Branch Analysis Area. If a decision is made, then additional decisions would be made on the methods to utilize to make these improvement and their connected actions.

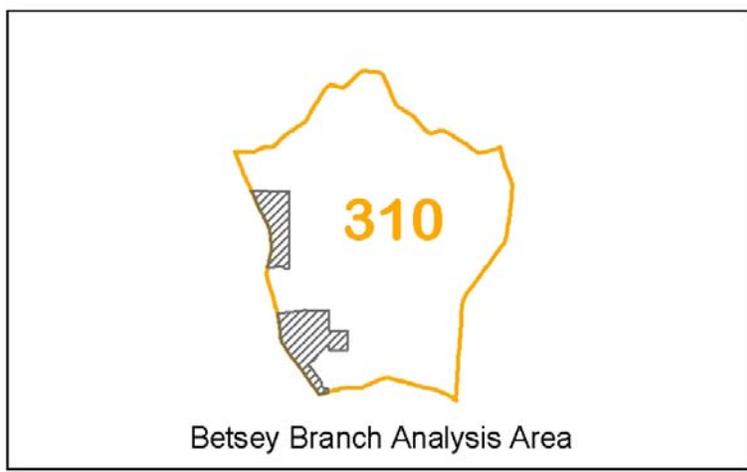


Figure 1: Vicinity Map

INTRODUCTION

Document Structure ---

The Forest Service has prepared this Environmental Assessment in compliance with the National Environmental Policy Act (NEPA) and other relevant Federal and State laws and regulations. This Environmental Assessment discloses the direct, indirect, and cumulative environmental impacts that would result from the proposed action and alternatives. The document is organized into four parts:

- *Introduction:* The section includes information on the history of the project proposal, the purpose of and need for the project, and the agency's proposal for achieving that purpose and need. This section also details how the Forest Service informed the public of the proposal and how the public responded.
- *Comparison of Alternatives, including the Proposed Action:* This section provides a more detailed description of the agency's proposed action as well as alternative methods for achieving the stated purpose. These alternatives were developed based on significant issues raised by the public and other agencies. This discussion also includes possible mitigation measures. Finally, this section provides a summary table of the environmental consequences associated with each alternative.
- *Environmental Consequences:* This section describes the environmental effects of implementing the proposed action and other alternatives. This analysis is organized by physical, biological, and socio-economic environment. Within each section, the affected environment is described first, followed by the effects of the No Action Alternative that provides a baseline for evaluation and comparison of the other alternatives that follow.
- *Agencies and Persons Consulted:* This section provides a list of preparers and agencies consulted during the development of the environmental assessment.
- *Appendices:* The appendices provide more detailed information to support the analyses presented in the environmental assessment.

Additional documentation, including more detailed analyses of project-area resources, may be found in the project planning record located at the Wakulla Ranger District Office in Crawfordville, Florida.

Background ---

Betsey Branch falls in Management Area (MA) 7.1, predominately longleaf and slash pine forest that is managed with a focus on an adaptive approach in maintaining or restoring ecosystem health. The analysis area consists of Compartment 310 and related areas, totaling 6,134 acres. Betsey Branch was identified on the National Forest's Five-year Action Plan. It is located on the west side of the Wakulla Ranger District (WRD) of the Apalachicola National Forest (ANF). Initial analysis indicates this analysis area offers many opportunities for forest management.

Purpose and Need for Action

The purpose of this initiative is to improve TES (threatened, endangered, and sensitive) species habitat, to improve forest health and sustainability, to protect wildland urban interface, to maintain soil productivity, and to provide public safety for forest users. The following conditions exist within or adjacent to the analysis area:

- Slash and longleaf pine plantations or immature stands above the optimum stocking
- Slash and loblolly pines exhibiting small crowns and stunted growth established on sites suitable for longleaf pine
- Hardwoods encroaching herbaceous groundcover, potential Flatwoods salamander habitat, and pine plantations
- Plowed line along swamp edge interfering with fire movement into the gently sloping ecotone
- Mature, even-aged longleaf stands with some pockets of advanced longleaf regenerations in the understory
- Heavy fuel loads along National Forest boundary adjacent private property
- Forest road traversing through an ephemeral pond
- Forest Road 314-I degraded by erosion introducing sediments to enter into nearby stream
- Unapproved bridge that presents a safety hazard to forest users

These actions are needed in response to the forestwide goals and objectives outlined in the Revised Land and Resource Management Plan for the *National Forests in Florida* (henceforth referred to as the Forest Plan). It also moves the analysis area towards desired future conditions described for Management Area 7.1 (US Forest Service 1999; DFC 4-39).

Proposed Action

The actions proposed by the Forest Service to meet the purpose and need would include:

- Thinning slash and longleaf plantation and mature stands
- Converting off-site slash and loblolly pine species to restore longleaf pine
- Applying herbicide(s) to reduce woody competition for site prep and/or to release longleaf pine seedlings
- Mechanically removing hardwood encroachment to improve TES species habitat
- Planting longleaf pine seedlings on sites
- Repairing soil erosion to prevent road degradation and sedimentation into Mill Creek
- Constructing 25-foot (width) firebreaks along forest boundary to protect natural resources, private property, and life
- Rehabilitating plowed lines introduce prescribe fire back into transitioning ecotone
- Removing an unapproved bridge to provide for safe environment for forest users

- Decommissioning a road to protect potential habitat for the threatened Flatwoods salamander
- Designation a helispot to support surrounding areas during prescribe burn and wildfire suppression efforts
- Designating a firewood area to reduce hardwood encroachment on acquired land

Actions connected to the proposal would include landline maintenance, road maintenance and reconstruction. These actions are described in detail in Chapter 2.

Decision Framework ---

Given the purpose and need, the deciding official reviews the proposed action and the other alternatives in order to make the following decisions:

- Which alternative best meets the purpose and need for the proposal?
- How each alternative addresses the issues developed by the interdisciplinary team and through public involvement?
- Which alternative or combination of alternatives to implement?

The deciding official may decide to take no action at this time.

Public Involvement ---

The proposal was first listed in the Schedule of Proposed Actions on October 1, 2007. The proposal was provided to the public and other agencies for comment during initial 14-day scoping on December 28, 2007. Four comments were received as a result of scoping efforts. In addition, as part of the public involvement process, the agency posted the draft Environmental Assessment on the Forest Service webpage for an official 30-day Notice and Comment Period. The Forest Service sent a letter, dated January 14, 2009, to the interested public on the Apalachicola National Forest public mailing list. The letter announced the availability of Betsey Branch Environment Assessment for public comment. A legal notice was posted in the *Tallahassee Democrat* on January 16, 2009.

Using the comments from the public, other agencies, organizations, and tribal contacts the interdisciplinary team (IDT) developed a list of issues to address.

Issues ---

The Forest Service separated the issues into two groups: significant and non-significant issues. Significant issues were defined as those directly or indirectly caused by implementing the proposed action. Non-significant issues were identified as those: 1) outside the scope of the proposed action; 2) already decided by law, regulation, Forest Plan, or other higher level

decision; 3) irrelevant to the decision to be made; or 4) conjectural and not supported by scientific or factual evidence. The Council on Environmental Quality (CEQ) NEPA regulations require this delineation in Sec. 1501.7, "...identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3)..." A list of non-significant issues and reasons regarding their categorization as non-significant may be found in Appendix A.

The Forest Service identified the following significant issues during initial scoping.

- Potential impact of site prep herbicide application
- Potential of forest users using the firebreak to access the forest

ALTERNATIVES INCLUDING THE PROPOSED ACTION

This chapter describes and compares the alternatives considered for the Betsey Branch Analysis Area project. It includes a description and map of each alternative considered. This section also presents the alternatives in comparative form, sharply defining the differences between each alternative and providing a clear basis for choice among options by the decision maker and the public. Some of the information used to compare the alternatives is based upon the design of the alternative (i.e., helicopter logging versus the use of skid trails) and some of the information is based upon the environmental, social and economic effects of implementing each alternative (i.e., the amount of erosion or cost of helicopter logging versus skidding).

Alternatives

Alternative A

The Proposed Action Alternative

The Forest Service is proposing to improve habitat for threatened, endangered, and/or sensitive species; improve forest health and public safety; and to implement the forest plan by proposing several actions within the Betsey Branch Analysis Area.

The habitat for threatened, endangered, and/or sensitive species would be improved by:

- Replacing 83 acres of poorly growing or off-site tree species with native longleaf (Clearcut, herbicide site prep with Triclopyr, prescribed burn, supplement native groundcover by planting or seeding wiregrass)
- Replacing 8 acres of poorly growing or off-site tree species with native longleaf (Clearcut, single chop of site prep, prescribe burn, hand plant Longleaf and release seedlings with herbicide)
- Under-planting 78 acres of a poorly growing slash pine plantation with longleaf pine
- Mulching 23 acres of brushy areas around potential Flatwoods salamander breeding ponds and/or future RCW habitat

- Thinning 790 acres to reduce the basal area and increase the average diameter of trees by opening up the stands
- Managing the road system to close a road that traverses the edge of a potential Flatwoods salamander breeding pond (hand plant longleaf seedlings)

Forest health would be improved by:

- Reducing the woody component of the understory on 46 acres by allowing public firewood removal and treating the remaining hardwood vegetation with the herbicide triclopyr
- Release native groundcover vegetation and pine seedlings on 40 acres by treating the woody species in the understory with the herbicide hexazinone
- Leveling soil berms and planting wiregrass plugs on 2 acres of old fire lines to help remove barriers to the spread of fire during prescribe burns
- Removing diseased trees during thinning operations and thinning young pine plantations on 790 acres
- Repairing 4 erosion spots and constructing lead-off ditches on forest road 314-I Public safety would be improved by:
 - Increasing fire line width along 3.5 miles private property on approximately 8 acres to reduce the chance of wildfire spread to or from private land
 - Designating 4 acres as a new helispot and dip site on the east side of highway 375
 - Removing an unsafe user created bridge and replacing it with a rock crossing

The goals and objectives of the Forest Plan would be implemented by:

- Initiating uneven-aged management principals on 80 acres to modify stand structure to encourage or release existing natural pine regeneration
- Moving toward the desired future conditions of several management areas through the actions proposed in this alternative.

Some connected actions necessary to implement the above mentions action include:

- Using and maintaining approximately 13.7 miles of forest roads:
 - 5.2 miles of road reconstruction,
 - 8.5 miles of road maintenance
- 3.5 miles of landline maintenance

This preferred alternative would move the analysis area closer to the desired future conditions set forth in the forest plan for Management Area 7.1. See the following table and map for a comprehensive description of each treatment stands.

Table 1. Proposed Action Alternative

Treatment Action	Comp	Stand	Acre	Forest Type	Cond Class	Age as of (2008)	Average BA
Replace 83 acres of poorly growing or off-site tree species with native longleaf (Clearcut, herbicide site prep (triclopyr), prescribe burn, supplement native groundcover, and hand plant longleaf pine)	310	4	34	22	9	33	71
	310	82	36	31	11	48	24
	310	125	13	22	9	41	81
Replace 8 acres of off-site tree species with native longleaf (Clearcut, single chop for site prep, prescribe burn, hand plant longleaf pine, and release seedling using the herbicide triclopyr)	310	8	8	22	11	38	23
Under-plant 78 acres of a poorly growing slash pine plantation with longleaf pine	310	59	78	22	13	41	40
Mulching 23 acres of brushy areas around potential Flatwoods salamander breeding ponds and/or future RCW habitat	310	13	8	22	11	41	62
	310	59	15	22	13	41	40
Thin 790 acres to reduce the basal area and increase the average diameter of trees opening up the stands	310	2	115	22	10	65	143
	310	7	13	22	12	73	75
	310	10	141	22	11	41	62
	310	25	29	22	11	24	86
	310	32	70	22	11	39	92
	310	33	70	22	11	24	96
	310	48	18	21	10	75	72
	310	49	58	22	11	24	101
	310	50	31	22	11	24	78
	310	51	15	21	13	33	52
	310	60	39	22	11	60	66
	310	74	9	22	11	24	93
	310	75	32	22	11	24	111
	312	1	38	22	11	41	106
	312	5	17	22	11	33	80
	312	6	29	22	11	73	70
	312	7	55	22	11	33	76
313	31	11	22	11	35	70	
Manage the road system to close a road that traverses the edge of a potential Flatwoods salamander breeding pond (decommission road by hand planting with longleaf seedlings)	310	59	Road 314-P	0.25 mile			
Reduce the woody component of the understory by allowing public to remove firewood and treating the remaining hardwood vegetation with the herbicide triclopyr	310	80	10	31	11	48	N/A

Treatment Action	Comp	Stand	Acre	Forest Type	Cond Class	Age as of (2008)	Average BA
Release native groundcover vegetation and pine seedlings on 40 acres by treating the woody species in the understory with the herbicide hexazinone	310	11	40	21	11	14	N/A
Level soil berms and planting wiregrass plugs on 2 acres of old fire lines to help remove barriers to the spread of fire during prescribe burns	310	9	2	22	12	70	N/A
Removing diseased trees during thinning operations and thinning young pine plantations on 790 acres	Stands listed above under thinning						
Repairing 4 erosion spots and constructing lead-off ditches on forest road 314-I	310	6, 11, 12	4 Spots				
Increasing fire line width along 3.5 miles private property on approximately 8 acres to reduce the chance of wildfire spread to or from private land	310	4, 33, 36, 51, 49, 75, 82, 94, 125	8				
Designating 4 acres as a new helispot and dip site on the east side of highway 375	310	126	4	22	9	41	81
Removing an unsafe user created bridge and replacing it with a rock crossing	310	6					
Initiating uneven-aged management principals on 80 acres to encourage or release existing natural pine regeneration	310	31	51	21	10	92	71
	310	54	15	21	12	76	70
	310	72	14	21	10	92	62
Connected Actions include:							
Road Maintenance			8.5 mi.				
Road Reconstruction			5.2 mi.				
Land Line Maintenance	310	4, 33, 36, 51, 49, 75, 82, 94, 125	3.5 mi.				

The proposed timber harvest would produce an estimate of 4.5 hundred cubic foot (CCF) per acre of timber products. These actions, if approved, would take place within the next 3 to 5 years.

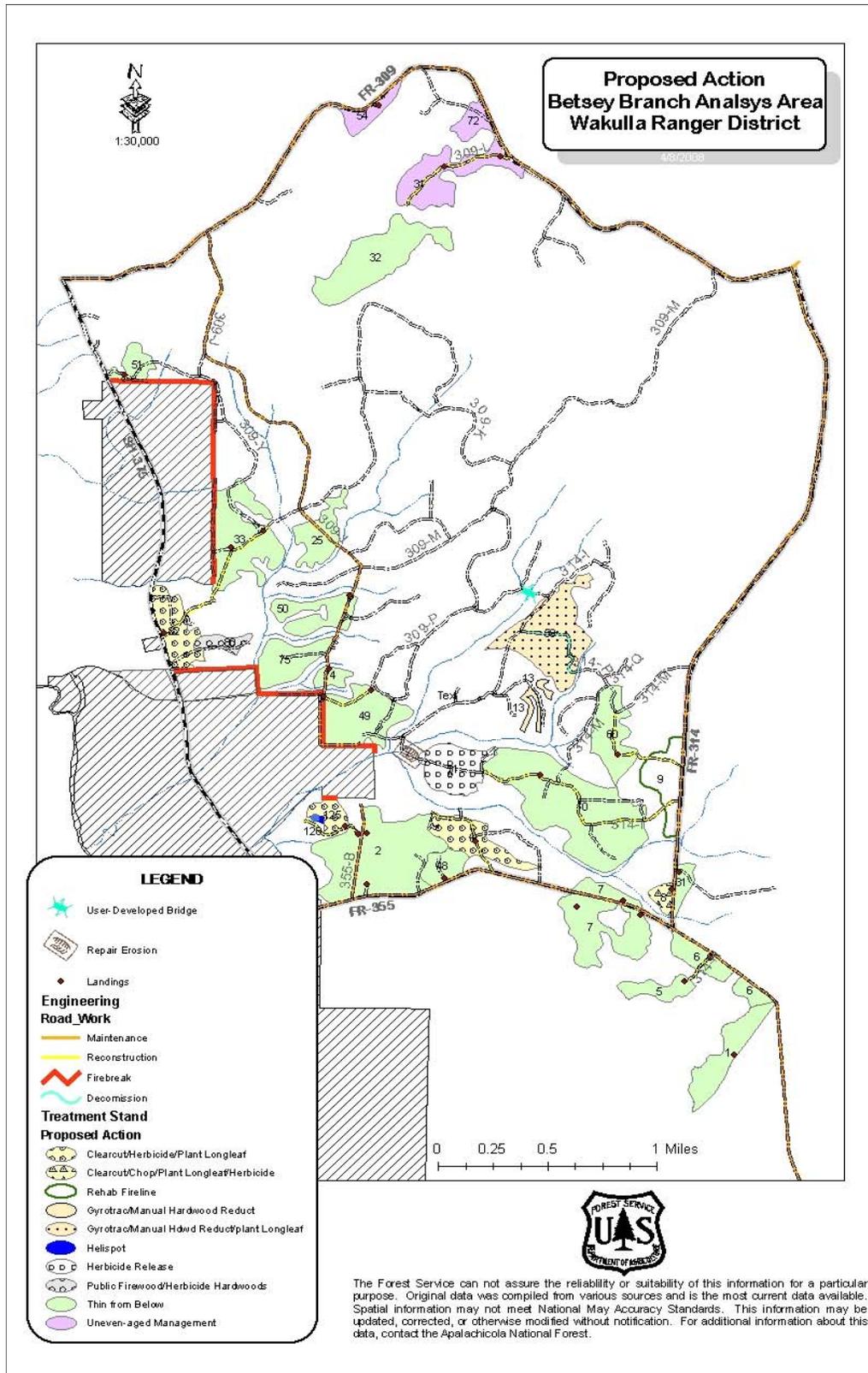


Figure 2. Proposed Action Alternative (Not to Scale)

Alternative B

The Prescribed Burn Alternative

Under this alternative, the proposed treatments would be same as the proposed action with the exception of applying herbicides for site preparation prior to planting longleaf seedlings or applying herbicides for hardwood reduction for timber stand improvement.

The habitat for threatened, endangered, and/or sensitive species would be improved by:

- Replacing 91 acres of poorly growing or off-site tree species with native longleaf (Clearcut, prescribe burn only for site prep, Supplement native groundcover on some of these stands by planting or seeding wiregrass, and hand plant longleaf pine)
- Under-planting 78 acres of a poorly growing slash pine plantation with longleaf pine
- Mulching 23 acres of brushy areas around potential Flatwoods salamander breeding ponds and/or future RCW habitat
- Thinning 790 acres to reduce the basal area and increase the average diameter of trees by opening up the stands
- Managing the road system to close a road that traverses the edge of a potential Flatwoods salamander breeding pond (hand plant longleaf seedlings)
- Reduce the woody component of the understory by allowing public to remove firewood and treating the remaining hardwood vegetation with prescribe fire
- Release native groundcover vegetation and pine seedlings on 40 acres by treating the woody species in the understory with prescribe fire

Forest health would be improved by:

- Leveling soil berms and planting wiregrass plugs on 2 acres of old fire lines to help remove barriers to the spread of fire during prescribe burns
- Removing diseased trees during thinning operations and thinning young pine plantations would maintain tree vigor and reduce the chance of insect and disease attacks on 790 acres
- Repairing 4 erosion spots and constructing lead-off ditches on forest road 314-I would help maintain soil stability and reduce soil loss

Public safety would be improved by:

- Increasing fire line width along 3.5 miles private property or approximately 8 acres to reduce the chance of wildfire spread to or from private land
- Designating 4 acres as a new helispot and dip site on the east side of highway 375
- Removing an unsafe user created bridge and replacing it with a rock crossing

The goals and objectives of the Forest Plan would be implemented by:

- Initiating uneven-aged management principals on 80 acres to modify stand structure to encourage or release existing natural pine regeneration

- Moving toward the desired future conditions of several management areas through the actions proposed in this alternative.

Some connected actions necessary to implement these actions include:

- Using and maintaining approximately 13.7 miles of forest roads:
 - 5.2 miles of road reconstruction,
 - 8.5 miles of road maintenance
- 3.5 miles of landline maintenance

Most of the activities in this alternative would move the analysis area closer to the desired future conditions set forth in the forest plan for Management Area 7.1. However, the prescribed burn method may not be as effective for site preparation, herbaceous groundcover and longleaf seedlings release, or hardwood reduction. See the following table and map for a comprehensive description of each treatment stands.

Table 2. Prescribed Burn Alternative (B)

Treatment/Action	Comp	Stand	Acre	Forest Type	Cond Class	Age as of (2008)	Average BA
Replace 91 acres of poorly growing or off-site tree species with native longleaf (Clearcut, prescribe burn only for site prep, and hand plant longleaf pine *supplement native groundcover by planting or seeding wiregrass)	310	4*	34	22	9	33	71
	310	82*	36	31	11	48	24
	310	125*	13	22	9	41	81
	310	8	8	22	11	38	23
Under-plant 78 acres of a poorly growing slash pine plantation with longleaf pine	310	59	78	22	13	41	40
Mulching 23 acres of brushy areas around potential Flatwoods salamander breeding ponds and/or future RCW habitat	310	13	8	22	11	41	62
	310	59	15	22	13	41	40
Thin 790 acres to reduce the basal area and increase the average diameter of trees opening up the stands	310	2	115	22	10	65	143
	310	7	13	22	12	73	75
	310	10	141	22	11	41	62
	310	25	29	22	11	24	86
	310	32	70	22	11	39	92
	310	33	70	22	11	24	96
	310	48	18	21	10	75	72
	310	49	58	22	11	24	101
	310	50	31	22	11	24	78
	310	51	15	21	13	33	52
	310	60	39	22	11	60	66
	310	74	9	22	11	24	93
	310	75	32	22	11	24	111
	312	1	38	22	11	41	106
	312	5	17	22	11	33	80
	312	6	29	22	11	73	70
312	7	55	22	11	33	76	

Treatment/Action	Comp	Stand	Acre	Forest Type	Cond Class	Age as of (2008)	Average BA
	313	31	11	22	11	35	70
Manage the road system to close a road that traverses the edge of a potential Flatwoods salamander breeding pond (decommission road by hand planting longleaf seedlings)	310	59	FR 314-P	0.25 mile			
Reduce the woody component of the understory by allowing public to remove firewood and treating the remaining hardwood vegetation with prescribe fire	310	80	10	31	11	48	N/A
Release native groundcover vegetation and pine seedlings on 40 acres by treating the woody species in the understory with prescribe fire	310	11	40	21	11	14	N/A
Level soil berms and planting wiregrass plugs on 2 acres of old fire lines to help remove barriers to the spread of fire during prescribe burns	310	9	2	22	12	70	N/A
Removing diseased trees during thinning operations and thinning young pine plantations on 790 acres	Stands listed above under thinning						
Repairing 4 erosion spots and constructing lead-off ditches on forest road 314-I	310	6, 11, 12	4 Spots				
Increasing fire line width along 3.5 miles private property or approximately 8 acres to reduce the chance of wildfire spread to or from private land	310	4, 33, 36, 51, 49, 75, 82, 94, 125	8				
Designating 4 acres as a new helispot and dip site on the east side of highway 375	310	126	4	22	9	41	81
Removing an unsafe user created bridge and replacing it with a rock crossing	310	6					
Initiating uneven-aged management principals on 80 acres to encourage or release existing natural pine regeneration	310	31	51	21	10	92	71
	310	54	15	21	12	76	70
	310	72	14	21	10	92	62
Moving toward the desired future conditions of several management areas through the actions proposed in this alternative							

Connected Actions include:							
Road Maintenance			8.5 mi				
Road Reconstruction			5.2 mi				
Land Line Maintenance	310	4, 33, 36, 51, 49, 75, 82, 94 125	3.5 mi				

This alternative would also produce an estimate of 2.8 hundred cubic foot (CCF) per acre of timber products. These actions, if approved, would take place within the next 3 to 5 years.

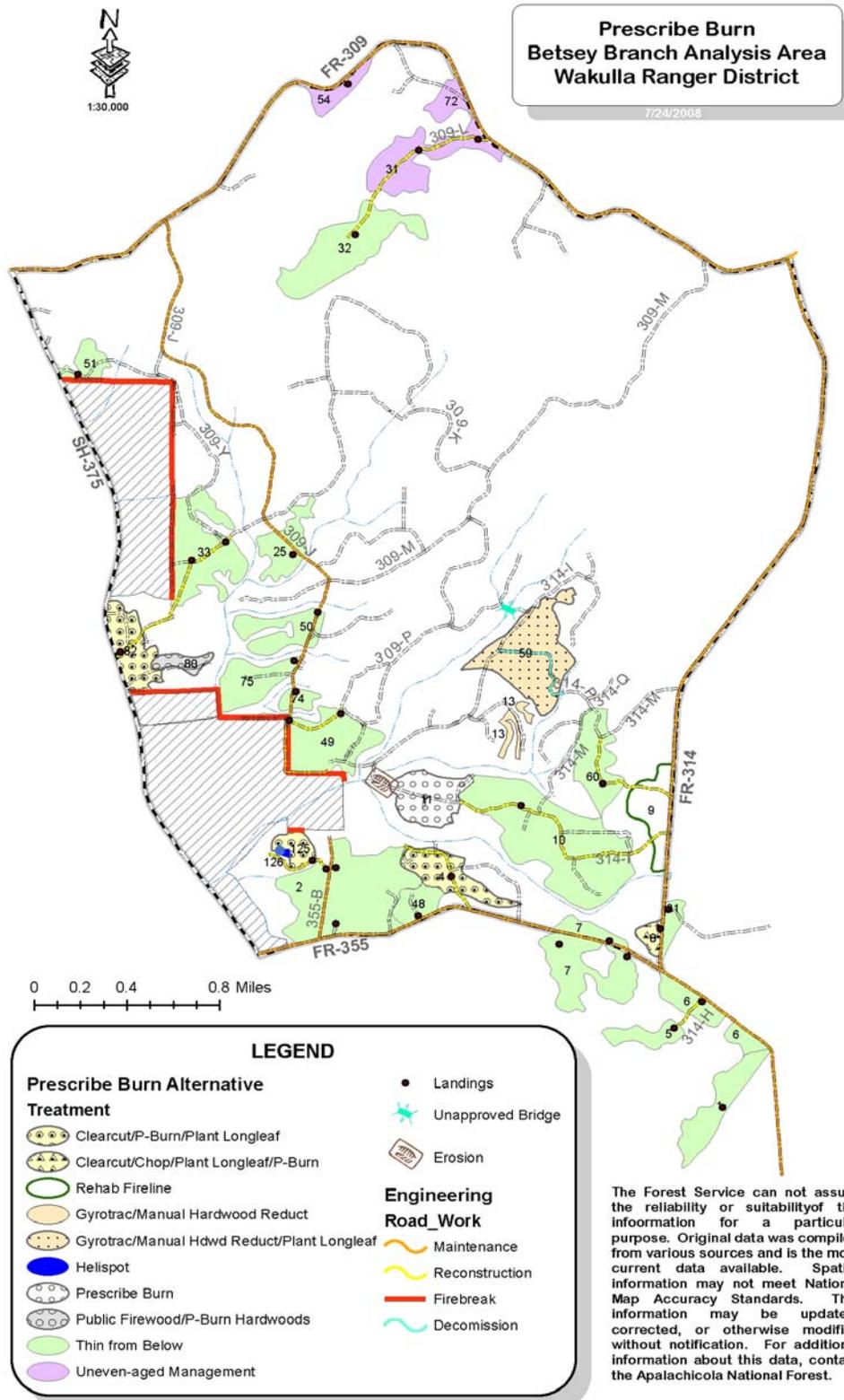


Figure 3. Prescribed Burn Alternative (Not Scale)

Alternative C

The No Action Alternative

Under the No Action alternative, current management plans, such as prescribed burns for hazardous fuel reduction, routine road maintenance for public safety, and refurbishing national forest boundary lines would continue to guide management of the project area. No thinnings, clearcuts, uneven-aged group selection cuts, herbicide applications, planting longleaf seedlings, repairing soil erosions, constructing firebreaks, rehabilitating plowed lines, designating a helispot, removing an unapproved bridge, decommissioning a road, and designating a firewood area would be implemented to accomplish project goals.

Alternatives Considered But Not Discussed in Detail

An adjacent landowner expressed a concern about the possibility of hunters, or forest users, utilizing the firebreaks to access the National Forest. The proposed firebreaks would be for administrative use only. The Forest Service has recently implemented the decision for the Apalachicola National Forest Motorized Route Designation Environmental Assessment designating roads and trails that are open for motorized public use. However, the firebreaks or trails may be used by horseback riders or hikers. These uses are not limited to trails. Other violators would be regulated by Forest Service and local law enforcement.

The landowner also expressed a concern of reducing the adjacent stands density would increase hunting success and increase the occurrences of hunters shooting towards private property, further reducing public safety. Reducing the stands' density would also increase sight distance. Discharging firearms over paved public roads, right-of-way, highways, streets or occupied premises is prohibited. Violators should be reported to Florida Fish and Wildlife Conservation or local law enforcement.

A representative of a non-profit organizations expressed a concern of the Forest Service not utilizing the alternatives analyze requirements of NEPA to help determine if there are other options to accomplish the same objective for designating a helispot to protect the Smith Creek Community. This community is wedged in the center of the Apalachicola National Forest. The Forest Service, state and local partners are in the process of developing a Community Wildfire Protection Plan for the Smith Creek Community to reduce the risk of wildfire. The proposed designation of the helispot is adjacent to an existing borrow pit which may serve as alternate water source if needed. Often, the Forest Service has more than one helicopter staged, and this would allow for another helispot in close proximity to the Smith Creek Community and the Bradwell Bay Wilderness Area. The proximity to the community, wilderness area, and alternate water sources would decrease the response time. The difference in response time could be a matter of loss of life, property, or resources. The location best meets the purpose and need for the proposed helispot.

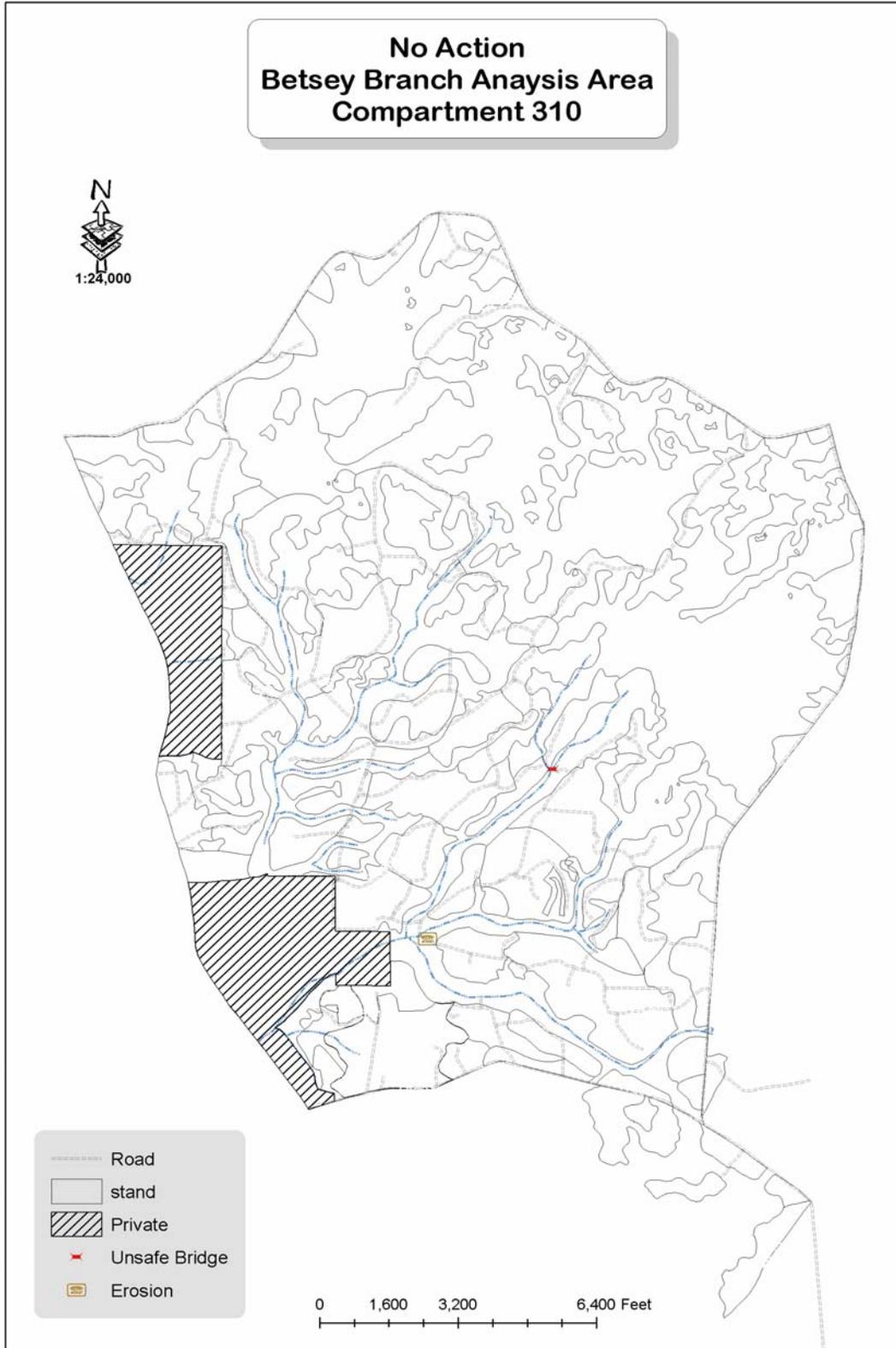


Figure 4. No Action Alternative (Not to Scale)

Coordination Measures Common to All Alternatives _____

Coordination measures were developed to ease some of the potential impacts the various alternatives may cause. The coordination measures may be applied to any of the action alternatives.

Soil & Water

- *In stands 33, 80, and 82 (of Compartment 310), restrict soil compacting activities, including logging traffic – on Bladen, Eureka, Iberia, and Megget soil series when the water table is within 12 inches of the surface, or when soil moisture exceeds the plastic limits.*
- *No operation of heavy equipment would occur during periods when weather conditions and soil conditions would promote excessive rutting or compaction.*
- *A 35-foot Special Management Zone would be required in the following area(s): Compartment 310 - stands 2, 7, 8, 29, 33, 49, 50, 54, 59, 74, 75, and 82.*

Air Quality

- *No herbicide would be applied within 100 feet of private land or 300 feet of a private residence, unless the landowner agrees to closer treatment.*
- *No herbicides would be applied when wind speed is greater than 8 miles per hour.*

Vegetation

- *Timber sale, road construction, and site preparation contracts would contain Equipment Cleaning clauses to prevent the introduction of exotic plants.*
- *The guidelines for planning and applying herbicides contained in the Vegetation Management Environmental Impact Statement would be followed (Veg. Mgmt. FEIS 1989)*
- *An Emergency Spill Plan would be developed to minimize hazards to people and natural resources in the event of an accident.*

Proposed, Endangered, Threatened and Sensitive (PETS) Species

- *If modifications are made in the project, or if additional information regarding the effects of the project on listed species becomes available, the US Fish and Wildlife Service (USFWS) would be notified and informal consultation would be reinitiated if the USFWS for the Forest Service determines it is needed.*
- *Timber and road contracts would prohibit harvest, hauling, and/or roadwork within active Red-cockaded Woodpecker (RCW) clusters during the nesting season, April 1 through July 31. Exceptions would be made for hauling and/or roadwork on major numbered roads and highways.*

Heritage Resources

- *Known cultural resource sites would be protected by timber sale contract and no ground disturbing activities would occur in these areas, which may include segments of roads.*
- *If any heritage resources were discovered during operations, all ground-disturbing activities would cease. The Forest Archaeologist would determine changes to be made to the project area to the project before work would resume.*

Visual Quality

- *All logging debris within 100 feet of Maintenance Levels 5 and 4, formerly Traffic Service Levels A and B, roads (State Road 375, Forest Road 309) would be lopped and scattered within 2-feet of the ground.*
- *No herbicide would be applied within 100 feet of private land or 300 feet of a private residence, unless the landowner agrees to closer treatment.*
- *Notice signs (FSH 7109.11) are clearly posted, with special care taken in areas of anticipated visitor use.*

Comparison of Alternatives

This section provides a summary of the effects of implementing each alternative. Information in the table is focused on activities and effects where different levels of effects or outputs can be distinguished quantitatively or qualitatively among alternatives.

Table 3. Comparison of Alternatives

Need	Proposed Actions and Purpose	Unit	Alternatives		
			A*	B	C
Improve Habitat of Threatened, Endangered, or Sensitive Plant & Animal Species By:	Removing poorly growing or off-site species				
	-- Clearcut slash pine, herbicide site preparation, prescribe burn, and hand plant longleaf pine. (Stands 4, 82, 125)	<i>Acres</i>	83	0	0
	-- Clearcut slash pine, prescribe burn for site preparation, and hand plant longleaf pine (Stands 4, 8, 82, 125)	<i>Acres</i>	0	91	0
	-- Clearcut slash pine, single chop for site preparation, prescribe burn, hand plant longleaf pine, and release pine seedlings with herbicides. (Stand 8)	<i>Acres</i>	8	0	0
	-- Under-plant poorly growing slash plantation with longleaf seedling (Stand 59)	<i>Acres</i>	78	78	0
	Reducing the woody component of understory				
	-- Mulching brushy areas around potential Flatwoods salamander breeding ponds (Stand 59)	<i>Acres</i>	15	15	0
	-- Mulching to increase herbaceous vegetation for long-term RCW habitat (Stand 13)	<i>Acres</i>	8	8	0
	Reducing basal area and increasing average tree diameter				
	-- Thinning young pine plantations	<i>Acres</i>	790	790	0
	-- Thinning older stands from below	<i>Acres</i>	110	110	0
Improve Forest Health By:	Managing the transportation system				
	-- Closing road that traverse the edge of a potential Flatwoods salamander breeding pond	<i>Miles</i>	0.25	0.25	0
	Reducing the woody component of the understory				
	-- Apply the herbicide Hexazinone (Stand 11)	<i>Acres</i>	40	0	0
	-- Firewood removal and apply the herbicide Triclopyr (Stand 80, 82)	<i>Acres</i>	46	0	0
	Removing barriers to fire spread				
	-- Rehabilitate old fire lines (Stand 9)	<i>Acres</i>	2	2	0
	Reducing chances of insect and disease attacks				
	-- Thin young plantations from below	<i>Acres</i>	790	790	0
	-- Target diseased trees during thinning	<i>Acres</i>	790	790	0
	Maintaining soil stability				
-- Repair erosion and construct water leadoff ditches on FR 314-I	<i>Sites</i>	4	4	0	
Increase Public Safety By:	Protecting private and forest lands from wildfire spread				
	-- Increasing fire line width	<i>Acres</i>	8	8	0
	-- Designate a helispot	<i>Acres</i>	4	4	0
	Managing transportation system				
-- Remove unapproved bridge and replace with rock crossing	<i>Each</i>	1	1	0	
Implement the Forest Plan By:	Identifying the access for analysis area				
	-- Roads open to public	<i>Miles</i>			
	-- Roads to close	<i>Miles</i>	0.25	0.25	0
	Move area toward future desired condition				
	-- Implementing Uneven-aged management principals	<i>Acres</i>	80	80	0
	-- Wild and Scenic River - MA 0.3	<i>Yes / No</i>	Yes	Yes	No
-- Longleaf/Slash, Adaptive Mgmt., RCW Mgmt. - MA 7.1	<i>Yes / No</i>	Yes	Yes	No	
-- Forest/Urban Interface - MA 9.2	<i>Yes / No</i>	Yes	Yes	No	
Connected Actions	-- Road maintenance	<i>Miles</i>	8.5	8.5	5.5
	-- Road reconstruction to haul timber removed	<i>Miles</i>	5.2	5.2	0
	-- Landline Maintenance	<i>Miles</i>	3.5	3.5	0
	-- Prescribe Burn	<i>Acres</i>	598	598	598
Products produced	-- Sawtimber	<i>CCF</i>	327	327	0
	-- Pulpwood	<i>CCF</i>	3027	3027	0
	-- Post	<i>CCF</i>	0	0	0
	-- Product Value	<i>Dollars</i>	\$102,723	\$102,723	\$ 0
Revenue	Net Worth	<i>Dollars</i>	-\$25,005	-\$4,490	-\$138,750

ENVIRONMENTAL CONSEQUENCES

This section summarizes the physical, biological, social and economic environments of the affected project area and the potential changes to those environments due to implementation of the alternatives. It also presents the scientific and analytical basis for comparison of alternatives presented in the chart above.

Physical Environment

Soil & Water

The Betsey Branch Analysis Area is underlain with three four general soil series associations as described by the Soil Vegetation of the Apalachicola National Forest: (1a) Rutlege – Dorovan Soils, (2) Leon – Rutlege – Scranton, and (3) Leon – Blanton – Mandarin.

The Rutlege – Dorovan soils association, which can be described as titi, cypress, or bay swamps, cover most of the analysis area. This association makes up about 15-35% of the national forest and is characterized by flat to slightly concave landforms commonly called bays, bayheads, or swamps. Runoff from surrounding areas, surface and subsurface, collects in these areas and mucky ponds are common. Where there are no ponds, water is on or near the surface most of the year. Water moves over broad areas as sheet flow because stream channels are absent or poorly defined due to the low elevation and flatness. Titi swamps is the dominant community in the unit. The overstory consists of titi, pond pine, slash pine, and myrtle-leaf holly. The understory is dense and shrubby, mostly 6-20 feet high, and dominant.

Leon – Rutlege – Scranton soils association consists of nearly level flatwoods ridges interwoven with many titi and bay swamps. The unit makes up about 15 percent of the forest and occurs as large segments in the central part of the Wakulla Ranger District. Runoff from Leon and Scranton soils collects on the Rutlege soils and associated ponds. Runoff is very slow and the drainage network is poorly defined.

Leon – Blanton – Mandarin soils association is similar in many ways but differs by having more flatwoods ridges and fewer swamps. This unit makes up about 15 percent of the Forest and is characterized by nearly level to slightly convex flatwoods interlaced with bay titi swamps. Runoff from the ridges collects in the narrow swamps and moves to poorly defined stream channels or sloughs. The ridge subsoils stay saturated for long periods after heavy rainfall.

The following table describes the soils types by acres, treatment acres, landform and plant community, drainage class, potential erosion hazard and equipment limitations of the soils (US Forest Service, 1984). Refer the Soil Series Analysis Map in Appendix E to view the soil distribution within the analysis area.

Table 4 Soil Series Analysis

Soil Type	Acres	Treatment Acres	Ecological Community	Drainage Class ¹	Erosion Hazard	Equipment Limitations
Albany	483	262	Flatwoods	SPD	Slight	Moderate
Alpin	108	38	Sandhills w/ Depressions and Sinkholes	WD	Slight	Moderate
Blanton	183	100	Sandhills & Pine Flatwoods w/ a few Swamps	MWD	Slight	Moderate
Chipleay	107	42	Sandhills and Pine Flatwoods	SPD	Slight	Moderate
Dorovan	1,910	65	Titi, Bay, or Cypress Swamps	VPD	Slight	Severe
Dothan	23	65	Titi, Bay, or Cypress Swamps	VPD	Slight	Severe
Foxworth	71	36	Sandhills and Pine Flatwoods	MWD	Slight	Moderate
Leefield	149	58	Longleaf Pine Ridges & Flatwoods w/ Hdwd	SWP	Slight	Moderate
Leon	702	135	Pine Flatwoods with Common Swamps	PD	Slight	Moderate
Mandarin	39	9	Pine Flatwoods with Common Swamps	SWP	Slight	Moderate
Meggett	110	46	Hydic Hardwood River Swamps	VPD	Slight	Severe
Ortega	545	45	Sandhills with Depressions and Sinkholes	WD	Slight	Moderate
Plummer	155	81	Savannahs and Slash Pine Flatwoods	PD	Slight	Severe
Rutlege	314	55	Hydic Hardwood Swamps	VPD	Slight	Severe
Sapelo	250	0	Flatwoods	PD	Slight	Moderate
Scranton	36	598	Pine Flatwoods with many Swamps	PD	Slight	Moderate
Surrency	264	31	River Swamp Cypress Stringers	VPD	Slight	Severe

The analysis area lies also within the boundaries of Ochlockonee River (HCU# 0312000310A) Watershed, which is approximately 149,689 acres within the forest boundary. The Ochlockonee River is impounded at Lake Talquin before entering the National Forest. Ponds, streams and swamps (wetlands) are present in the analysis area, and are located within or adjacent to nine of the thirty-seven stands proposed for treatment.

Environmental Effects: Maintaining landlines, designating a helispot or firewood area would not have an effect on the soil and water resources in this analysis area. Therefore, these actions are not discussed under each alternative. Neither of the alternatives considered would destroy

¹ Drainage Class: Excessively Drained (ED), Somewhat Excessively Drained (SWE), Well Drained (WD), Moderately Well Drained (MWD), Somewhat Poorly Drained (SWP), Poorly Drained (PD), Very Poorly Drained (VPD)

wetlands. All activities would adhere to Florida's Silvicultural Best Management Practices, which require Special Management Zones (SMZ) along streams, ponds, and wetlands to mitigate any potential impact of siltation from prescribe burning, road reconstruction, road maintenance, and silvicultural treatments.

In Alternatives A and B, soil movement is likely to occur during silvicultural operations, such as timber harvesting, mechanical site prep and hardwood reduction and the associated road work. Some soil may fuse to the equipment tires vehicular tires and trees being removed, which may cause an insignificant amount of soil to be removed from the site. Soil movement may also occur during road reconstruction and improvement work. The amount of soil moved is not expected to be significant and would be mitigated by following the standards and guidelines established in the Forest Plan and the Florida's Silvicultural Best Management Practice Manual.

The water table may rise temporarily after harvesting trees in Alternatives A and B. This increase would be due to vegetation removal, which contributes to water losses through interception and translocation. With less vegetation on site, more rain would runoff and possibly contributes to soil movement.

Rehabilitating the eroding soils would improve soil productivity and stability, protect heritage resources, sensitive plant species habitat, and water quality. Special Management Zones would protect water quality by reducing or eliminating forestry related inputs of sediment, nutrients, logging debris, chemicals and water temperature fluctuations that can adversely affect aquatic communities (Florida Department of Agriculture and Consumer Sciences, 2004). In treatment stands adjacent streams, the following project coordination measure would be applied to minimize the effects on water quality:

- *A 35-foot Special or/Streamside Management Zone (SMZ) would be required in Compartment 310, stands 2, 25, 33, 49, 50, 54, 59, 74 and 75.*

Alternative A

Road reconstruction, road maintenance, and repairing soil erosion would have the highest potential for soil movement in this alternative. The associated roadwork may cause an increase in soil erosion and run-off. "Erosion removes mineral particles, organic matter, and nutrients from the soil, reducing its thickness and water-holding capacity. Eroded soil then may become a pollutant in streams and reservoirs." (Singer and Munns, 1996) Stabilizing soil erosion would improve soil productivity.

Some soil may be displaced during the logging operations when skidders and other heavy equipment traverse across the land especially when dragging trees or lowering a blade. Stands 33, 80, and 82 contain Megget soils. The amount of impact to the soil resources are not expected to be significant once *Silviculture's Best Management Practices* and coordination measures are applied. In areas where soils have severe equipment limitations, the following restriction would be applied to minimize the effect of silvicultural practices:

- *Restrict soil compacting activities, including logging traffic – on Bladen, Eureka, Iberia, and Megget soil series when the water table is within 12 inches of the surface, or when soil moisture exceeds the plastic limits.*

Under this alternative, no soil movement would occur due to site preparation, which would be done using approved herbicides. However, the use of herbicides may have an affect on soils. The herbicide Hexazinone would be applied on a six-foot by six-foot grid pattern over the longleaf restoration areas. The application rate would be 5 ml of 50% diluted herbicide with water per spot. This equals approximately 3 quarts of Hexazinone per acre applied to 40 acres.

Hexazinone is a Photosynthetic inhibitor. It is readily absorbed through the roots and, to a lesser degree, through plant foliage. It has a moderate half-life of 1-6 months with the typical being approximately 90 days. It's a biodegradable herbicide with its primary breakdown by soil microbes.

Hexazinone is a non-selective broad spectrum herbicide in the triazine class. It is used to control grasses and broadleaf and woody plants. Hexazinone is a known to be pervasive groundwater contaminant, due to its high water solubility (Wikipedia Encyclopedia, 2008). This pesticide would only be applied when the potential for drift to adjacent sensitive areas, such as residential areas, water bodies, known habitat for threatened and endangered species, and non-target crop can be avoided.

Triclopyr is labeled for site preparation and release in forestry. This herbicide would be applied in two methods: hack-and-squirt and/or foliar applications. The application rate is 1.25 gallons per treated acre. Triclopyr is primarily absorbed by plant leaves and is readily moved throughout the plant. It affects plants by interfering with normal growth processes.

In soil, triclopyr is not highly mobile. It is rapidly broken down by soil micro-organisms and ultraviolet light, persisting an average of 30-56 days depending on soils and weather. Its half-life in water is about 10 hours at 72°F. This chemical also degrades very rapidly in water.

Neither hexazinone nor triclopyr would be applied within 100 feet of the private property or feet of water wells. The environmental consequences of this herbicide are also discussed in Chapter IV of the Final Environmental Impact Statement for Vegetation Management in the Coastal/Piedmont, Volume I.

Alternative B

Whether growing season or dormant season, prescribe burning would have the same affect on soils as in Alternative A.

Under this alternative, road maintenance, road reconstruction, timber harvesting, and prescribe burning would have the same affect on soils as Alternative B. Soil movement may also occur during mechanical site prep for tree planting or mulching for hardwood reduction. This movement would be localized. Some soil may be moved off site through water runoff. The environmental consequences of mechanical site preparation are discussed at length in Chapter IV of the Final Environmental Impact Statement for Vegetations Management in the Coastal/Piedmont, Volume I.

Alternative C

Some soil movement would also occur as a result of ongoing forest management. The affect of prescribed burning on soils would have a short-term reduction in litter and duff, but would increase the amount of organic matter in the uppermost layer of mineral soil. Refer to the Apalachicola Prescribed Burning FY 2007-2011 Environmental Assessment for more insight on the affects prescribed burning on soil. The existing firelines would be maintained causing an insignificant amount soil loss. The affects of road maintenance would also cause soil displacement, yet the amount of degradation would be insignificant. The existing soil erosions would persist, further decreasing in soil productivity and stability over time.

Past, present and future management activities on National Forest land in the analysis area, in combination with the proposed alternatives, would have cumulative effects on soil and water resources in the analysis area.

Past management activities include timber harvesting, site preparation prior to establishing plantations, and road construction may have cause sedimentation, erosion, soil nutrient loss, and soil compaction in the analysis area. These effects from the past are no longer occurring. Existing roads in the analysis area likely contribute a small level of sediment to wetlands today. The action alternatives would have very little impact to soil productivity in the analysis area, and those impacts would be short term. The cumulative effects of the proposed alternatives in combination with the past management activities would be minor.

Present, on-going management activities in the analysis area includes road maintenance prescribe burning all of the upland areas, road and landline maintenance within the analysis area. The area is scheduled for a controlled burn once every three years. Prescribe burn plays an essential role in nutrient cycling by releasing unavailable nutrients stored in plants, litter, and duff. Prescribed burning, in combination with the Proposed Action, would have a small cumulative effect on nutrient loss by volatilizing nutrients and increasing nutrient leaching. Consumption of vegetation by prescribe burns may also cause a small increase in precipitation runoff, but vegetation by prescribe burns may also cause a small increase in precipitation

This analysis area contains young pine plantations, not proposed for treatment at this time, which may need treatment in the future in order to sustain forest health and to improve RCW habitat. Older even-aged stands may be treated to convert to uneven-aged stands. It is likely that timber harvesting would occur again in this analysis area for at least ten years unless unforeseen events draw attention to it sooner.

Future timber harvesting activities would have effects to soil resources similar to effects of the actions proposed for this project, but the effects could be greater or lesser, depending on the type of harvesting. It is unlikely that timber harvesting will be proposed again in this area for another ten years. Effects to the proposed soil resources would be minor and short-term, and therefore minimal cumulative effects would be expected.

Reasonably foreseeable projects on the Apalachicola National Forest include Ditch Bay, Tower, Bradwell Game Farm, and Juniper Creek Timber Sales. Other vegetation management projects on the forest include Rock Pond in Compartments 30, 31 and 46; Bon Ami in Compartments 63, 64, 65, and 66; Alligator Pond in Compartments 342, 343, 344, and 347; and Long-Term Slash

Conversion in Compartments 17, 22, 52, 207, 208, 245, and 246. These projects would involve thinning pine plantations, restoring off-site slash pine to longleaf pine, herbicide applications, girdling and related road maintenance and reconstruction. It is unlikely these other projects would have cumulative effects because of their location from the proposed actions.

Past, present, and future management activities on National Forest land, the analysis area could be affected by activities on adjacent lands. With the implementation of Best Management Practices and additional project coordination measures; location of the treatment areas and established buffers; stabilized roadbeds; no large-scale ground disturbing activities; the ability of the groundcover to recover; and no outside influences, the cumulative effects of the action alternatives of the Betsey Branch Project on soil and water resources would be minimized and short-lived.

Air Quality

The Betsey Branch Analysis Area is located within Air Quality Class II Area, which allows a reasonable amount of air pollution. National Ambient Air Quality Standards (NAAQS) were set by the Environmental Protection Agency to promote a level of air quality sufficient to protect public health and welfare issues. The Florida Department of Environmental Protection (DEP) is responsible for inventory, monitoring, and regulation of air quality. Areas are divided into air quality classes. In Class I Areas, fresh air (lack of odor) is a recognized value of the area and very little air pollution is allowed. Bradwell Bay Wilderness rated as a Class I Area, borders the southeast corner of the analysis area. There are no major wood processing plants within 50 miles of the wilderness or the analysis area.

Class II Areas allow a moderate level of air pollution to accommodate industrial/urban development. Prescribe fire has been a part of management of this analysis area for many years. These compartments have been prescribed burn several times in the past. The table below shows the history of prescribed burn in these compartments in the last ten years. This analysis area currently meets National Ambient Air Quality Standards.

Table 5 Ten-Year Prescribed Burn History

COMP	FY-2008	FY-2007	FY-2006	FY-2005	FY-2004	FY-2003	FY-2002	FY-2001	FY-2000	FY-1999
310					X			X		
312				X				X	X	
313					X			X		

Environmental Effects: In Alternatives A and B, planting longleaf seedlings, repair soil erosion, constructing firebreaks, rehabilitating a plowed lines, designating a helispot, removing an unapproved bridge, decommissioning a road, designating a firewood area, and landline maintenance would have no effect on air quality.

Timber harvesting activities, road maintenance and reconstruction would temporarily reduce air quality in the immediate vicinity where heavy equipment is operating. In drought conditions, the movement of heavy equipment would cause dust to rise.

Short term effects would be anticipated during prescribe burns on day of ignition and days following due to smoke in the immediate area. Major effects of smoke on air quality would be visibility reduction and respiratory impairment near the fire, especially on State Highway 375, Forest Highway 13, and the adjacent Smith Creek Community. A Prescribed Burn Plan would be completed and approved to minimize effects to sensitive areas. None of the NAAQS is expected to be exceeded during the prescribe burn. The Apalachicola Fiscal Year (FY) 2007 – 2011 Prescribed Burn EA for the environmental effects to air quality.

In Alternative A, applying herbicides would not cause a reduction in air quality because the following coordination measures would be applied:

- *No herbicide would be applied within 100 feet of private land or 300 feet of a private residence, unless the landowner agrees to closer treatment.*
- *No herbicides would be applied when wind speed is greater than 8 miles per hour.*

Triclopyr and hexazinone are Class A herbicides that are of low toxicity and short persistence. The treatment method would be selective to the targeted species at application rates less than half the label rate allowed by the Environmental Protection Agency. No herbicide would be applied when weather conditions are unfavorable.

In Alternative C, ongoing forest management activities, such as prescribe burns, routine road, and landline maintenance would continue. Prescribe fires can become wildfires when they accidentally escape their boundaries and burn the adjacent areas. Without firebreaks and a helispot established, the risk to natural resources, human health, life and property would increase in the event of fire. In drought conditions, the routine road maintenance would cause dust to temporarily circulate in air in the immediate area. Landline maintenance would have no effect on air quality.

One cumulative impact on air quality would be conducting prescribed burns simultaneously with nearby landowners. This could add to the impact of smoke in the area. The Florida Division of Forestry (DOF) permit system evaluates this impact by considering area pollution load before issuing burn permits. No other cumulative effects are anticipated on air quality.

Biological Environment

Vegetation

Existing Condition: Forests are the dominant land use in Florida. They cover almost ½ of Florida’s 34 million acres. Most of Florida’s forests are in private ownership. Wakulla County has 388,300 acres of land and approximately 88% of that is in forests. 56% of the forests in Wakulla County are in public ownership.

Within the project area there are approximately 3,128 acres of pine stands ranging from 4 to 133 years old (See Table 9), interspersed with hardwood and mixed pine/hardwood swamps and stream buffers. These stands were field inventoried in the summer of 2007. The inventory followed the objectives set forth in Forest Service Handbook 2409.26d - Region 8 Silvicultural Examination and Prescription handbook.

Random variable radius plots were taken with a 10-factor prism in all stands proposed for treatment. Data obtained from these plots included such items as basal area, tree diameter and height, tree age, and understory composition. This data was also taken for stands not proposed for treatment but needed for RCW forage analysis.

A description of the understory and groundcover are described in Table 10 below.

Table 6. Understory Vegetation Types in Betsey Branch Analysis Area

Understory Type	Acres	Understory Type	Acres
Non Forest or Not Recorded	1254	Gallberry, Wax myrtle, Fetterbush	785
Scrub Oak	114	Titi	2219
Wiregrass	625	Undrained Flat or Prairie	0
Palmetto	888	Total	5986

Summarizing the botanical and silvicultural inventories, all stands proposed for activity in this project occur on mesic to somewhat xeric flatwoods. Stands to be treated include both mature pine and younger planted slash pine (*Pinus elliottii*). Dominance in the overstories of the mature stands ranges from nearly pure longleaf pine (*Pinus palustris*) to mixed and in a few cases nearly pure slash pine. The understory is mainly composed of saw palmetto, and gallberry, in combination with fetterbush, titi, wax myrtle, blueberry, sweetbay, huckleberry, or holly. The groundcover can be a combination of wiregrass, runner oak, broomsedge, or various other grasses and forbs. Surrounding the pine flatwoods are swamps, low areas, and natural drainages

that contain bottomland hardwoods. Between the pine ridges and bottomlands are usually a gently sloping, wet flatwoods ecotone. These areas are characterized by a sparse overstory of pine with either thick, shrubby understory and very sparse groundcover, or a sparse understory and dense groundcover of hydrophytic herbs and shrubs. There are existing roads and travel ways that cross these areas and through the bottomlands.

Table 7. Age-class Distribution by Forest Type for Compartment 310

Sum of Ac	Age-class* (Years old)											Grand Total
	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	100-110+	
Loblolly- Hardwood					36							
Longleaf Pine		68	18	340	6		148	33	237	83	90	1023
Slash Pine			297	532	396	270	109					1604
Loblolly Pine					10							10
Scrub Oak							8					8
Bald cypress - Water Tupelo							10					10
Sweet Bay - Swamp Tupelo - Red Maple							515		471			986
Undrained Flatwoods							23					23
Titi and brush							37		1730			1767
Grand Total		68	315	872	448	270	850	33	2456	83	90	5986
Percent of Total	0	1	6	16	8	5	16	1	44	1	2	100%

* data is based on Compartment 310 only

Past forestry practices that have affected the vegetation in the project area include planting slash pine on xeric sites (off-site slash pine), planting slash or loblolly pine plantations on mesic flatwoods, prescribed burning, and fireline plowing. Based on visual observations, some of the effects of past practices are still evident, including firelines that encircle some plantations and impede the fire regime, and some stunted off-site slash pine.

Most of the pine plantations in this analysis area are growing rapidly and the crowns of the trees in these stands are closing in and beginning to shade out the understory vegetation. A basal area of 62-110 ft² is common in the young pine plantations. The mature longleaf and slash pine stands are characterized by a more open condition with an average basal area of 70 ft² across the analysis area.

All of the stands in the analysis area are currently being managed under even-aged management. Many of the mature longleaf pine stands could be managed for uneven-age principals. An acceptable harvest method for uneven-aged management in Longleaf is group selection.

Some Old Growth stands, as designated by the forest plan, are within the analysis area.

Table 8. Designated Old Growth Stands within Betsey Branch Analysis Area

Old Growth Type	Forest Type	Birth-Year	Acres	Comp	Stand	DFC
Upland longleaf and south Florida slash pine forest, woodland, and savanna	21	1906	44	310	15	7.1
Upland longleaf and south Florida slash pine forest, woodland, and savanna	21	1875	21	310	20	7.1
Southern wet pine forest, woodland, and savanna	21	1875	16	310	27	7.1
Southern wet pine forest, woodland, and savanna	21	1913	5	310	29	7.1
Southern wet pine forest, woodland, and savanna	21	1911	1	310	47	7.1
Southern wet pine forest, woodland, and savanna	21	1911	35	310	52	7.1
Southern wet pine forest, woodland, and savanna	21	1913	7	310	55	7.1
Upland longleaf and south Florida slash pine forest, woodland, and savanna	21	1875	40	310	57	7.1
Upland longleaf and south Florida slash pine forest, woodland, and savanna	21	1900	20	310	58	7.1
Upland longleaf and south Florida slash pine forest, woodland, and savanna	21	1906	9	310	85	7.1
Southern wet pine forest, woodland, and savanna	21	1875	4	310	88	7.1
Southern wet pine forest, woodland, and savanna	21	1875	4	310	90	7.1

These old-growth stands were designated for the whole forest according to the guidance provided in Forestry Report R8-FR 62 at the projected acreages for individual management area (described in the Forest Plan on page 2-6). Many of the designated stands do not meet the old growth parameters in the report, but these stands were designated because these were the oldest stands and most likely to achieve the old-growth parameters first. None of the old growth stands are proposed for treatment in any alternative.

Non-Native Invasive Species

There are no known populations of non-native invasive species in the analysis area. As a mitigation measure to reduce the risk of infection timber sale, road reconstruction or maintenance and site preparation contracts that involve equipment would contain equipment cleaning clauses to reduce the risk of introduction of exotic plants.

If a population of non-native invasive species is discovered in the analysis area it could be treated under the authority established in the Environmental Assessment for Non-Native Invasive

Plant Control on the Apalachicola National Forest. The decision notice for this analysis was approved on a July 15, 2004.

Environmental Effects:

It is not anticipated that removal of an un-approved bridge, decommissioning a road, road maintenance or reconstruction, or designation of a helispot would affect vegetation or have a long-term cumulative effect on vegetation and therefore not discussed below.

Alternatives A and B propose the clearcut method to remove the off-site or poorly growing slash or longleaf pine in compartment 310 stands 4, 8, 82, and 125. Clearcutting is the optimal cutting method to be used for restoration of these stands back to longleaf pine. Longleaf is the species of pine, which naturally grew on these sites as recognized by the forest plan and the soils. None of the other cutting methods such as shelterwood with reserves would be appropriate because there are no longleaf pine trees on this site to act as seed sources for natural regeneration. Four acres of the longleaf sandhill forest type would not be reforested to serve as to serve as a helispot.

Another action proposed in Alternative A and B is the rehabilitation and restoration of an old fireline in stand 9 of compartment 310. Currently this fireline is stopping the natural spread of prescribed burning separating the ridge from the swamp transition zone. Rehabilitation of this old fireline will remove this barrier to the spread of fire making it easier to maintain the native vegetation.

Alternative A

Removing off-site or poorly growing species and replanting the sites to longleaf pine should increase the site productivity of the stands involved. Currently these stands are not growing well and have stagnated. These stands are not expected to reach sawtimber size classes. Regenerating these stands should correct this problem. Site preparation whether herbicide or mechanical would increase the survival of the longleaf seedlings to be planted. Site preparation is designed to kill or “knock back” woody vegetation that would compete with the longleaf seedlings for sunlight, nutrients, and water.

The herbicide triclopyr is a low toxicity herbicide that carries the signal word “Caution” on the product label. Triclopyr is semi-selective and especially useful for control of broad-leaf herbs and woody plant species. Grasses are generally tolerant and pines are tolerant of the amine formulation after setting buds in late summer. The active ingredient is readily absorbed by foliage with some stem uptake. It translocates up and down in plants, accumulating in the growing tissues and the root collar. Triclopyr amine is used as an injection or cut surface treatment in site preparation and release as a foliar spray in rights-of-way or for control of hardwoods in pine plantations.

Herbicide application would kill approximately 60% of the understory hardwoods. Application of herbicide in combination with prescribed fire would result in a reduction of upland hardwoods and an increase in the cover of wiregrass and other native groundcover (Brockway, 2000)

Chopping was prescribed as the site preparation method in stand 8 because the vegetation to be treated was over shoulder height making it hazardous for human application of herbicides. At that height the risk of the applicators being contaminated with the herbicide was beyond safety levels.

Roller chopping is a common site preparation method used throughout the southern United States. The effect of roller chopping has been well studied and disclosed. Past use the roller chopping on the Apalachicola National Forest has shown to be effective while not producing unacceptable soil displacement. The potential effects of chopping on the vegetation would be to crush the vegetation and to make 6-8 inch slits in the ground cutting the plant roots. The crushed vegetation forms a uniform continuous layer across the stand that aids prescribe burning about six weeks later.

A single chop would kill only a small portion of the vegetation on these sites. Several studies have revealed that chopping sites that have a strong woody component causes the site to become more herbaceous.

A description of mechanical site preparation and its environmental effects on vegetation are described in the Environmental Assessment for Vegetation Management in the Coastal Plain/Piedmont (chapter IV, pages 41-46).

Under-planting a poorly growing slash pine plantation with longleaf pine seedlings is a waste of government time and effort. There are experimental under-planting research projects in several locations around the south that have not yet proven this to be a successful regeneration method, especially in longleaf pine. The investment of planting longleaf pine seedlings under an existing pine canopy without any form of site preparation would probably end up with a poor survival rate and require a future cost to release any seedlings that may get established.

Mechanical treatment of brush around ponds that may be potential habitat for the Flatwoods salamander is an experimental project not utilized on the forest before. Recently, the GyroTrac has been used for fireline construction in sensitive areas and has been used to mulch hardwood trees for fuel reduction projects. It is anticipated that mulching the brush species around the pond edges would allow prescribed fire to penetrate deeper into the pond edges in the future. The current condition of the vegetation around the pond is considered overgrown with large stem diameters that only intense wildfire would kill. The effect of the mechanical removal would be to top kill the woody species that are too large for prescribed fire to knock back.

During harvesting operations of alternatives A or B, selected trees would be removed from the stands where thinning or group selection harvest methods are used. During these operations some brush and understory vegetation would be bent over and crushed. Once removed, the trees and understory brush cannot be put back on the stumps and are irreversibly lost.

Thinning and modified group selection would reduce the basal area of selected stands to the target amount, which is generally 50ft² by removing trees in the mid to lower diameter classes in the individual stands. The removal of pine trees would reduce the amount of pine needle litter that falls to the forest floor. Pine straw is one of the fuel types that provide continuity across a

forest stand allowing fire to spread evenly. It has been determined by our fuels specialist and a biologist that this pine straw reduction would not cause a reduction in our ability to prescribe burn these stands.

Harvesting operations, such as thinning and group selection pose a risk of direct mortality to sensitive plant species, but the benefit to the population as a whole would be positive. Thinning and group selection would open up the overstory of these stands allowing more sunlight to reach the forest floor, improving habitat for understory plants.

Thinning reduces the competition between residual trees for sunlight, moisture, and nutrients, causing an increase in radial growth. Trees and vegetation in and immediately adjacent to the stands to be thinned would be affected by the reduced competition. Trees, hardwood brush and herbaceous vegetation would all respond to the increase of sunlight, moisture, and nutrients.

The combination of removing selected trees and prescribe burning would have a beneficial effect on these stands. Thinning or selecting groups of trees would allow more sunlight to reach the forest floor, which could cause more hardwood brush to grow. Timely prescribe burns after the harvest operations would knock back or top kill the hardwood brush reducing the chances of its encroachment. The long-term cumulative effect of these actions would be to reduce the woody component of the understory and increase the habitat for herbaceous vegetation adapted to frequent fires.

The modified group selection cutting method being prescribed in Alternative A is very similar to thinning from below. The difference between the two is that with group selection would occur in targeted diameter classes, and forest openings would be made to release desirable pine seedlings in the understory. Releasing the existing regeneration would allow the young pine growing space in the stand so they may eventually become part of the overstory in the stand.

The use of herbicide(s) to control woody species in the understory is anticipated to be the most effective method for this action. However the use of herbicides would introduce manmade chemicals into the ecosystem. Hexazinone is generally selective, controlling most hardwoods while not affecting most grasses. Its mode of action is a photosynthetic inhibitor. The herbicide is readily absorbed through the roots and, to a lesser degree through foliage. It is translocated upward via the xylem. A description of Hexazinone and its environmental effects on vegetation is described in detail in the Environmental Assessment for Vegetation Management in the Coastal Plain/Piedmont (chapter IV, pages 46-50).

Timber harvesting, road reconstruction, road maintenance, and mechanical site preparation contracts would increase the risk of introducing non-native invasive plants into the project area. Contracts contain a clause that would require that mechanical equipment be cleaned before entering the project area and when moving from one unit to another within the project area.

Alternative B

Many of the proposed actions in Alternative B are the same as Alternative A. The main difference between alternatives is that herbicide operations have been replaced with prescribed burning.

The site preparation method proposed (prescribe fire) would increase pine seedling establishment and growth by reducing competition for light, moisture, and nutrients. While removing or killing the aboveground portion of groundcover plants, most perennial species can be expected to survive a moderate-intensity prescribe fire, however some loss of individual plants may occur.

Utilizing only prescribed fire for site preparation would not control or “knock back” the woody vegetation long enough to allow the longleaf seedlings to begin height-growth, reducing the survival of the seedlings. Longleaf pine seedlings are very shade intolerant and also intolerant of competition. Just a little competition may delay seedlings from entering height growth.

It is anticipated that using prescribed fire to release pine seedlings and enhance groundcover would also not work well. The stands in question have not burned well during past prescribed burns. Compartment 310 has been burned 4 times in the dormant season since 1995 and is planned for another dormant season burn during 2009. Ground cover conditions in these stands are deteriorating quickly and the scrub oaks are shading out the wiregrass. Growing season burning has been shown to increase the herbaceous content of the groundcover vegetation but the next growing season burn that could be applied to this stand would be summer 2011.

The risk of introducing non-native invasive species is unlikely or about the same as alternative A.

Alternative C

The use of prescribed fire to control the vegetation around potential Flatwoods salamander ponds has not been effective in the past. The current condition of the vegetation around the pond is considered overgrown with large stem diameters that only intense wildfire would kill. Alternative C would not thin any slash pine plantations. These plantations need thinning to keep the young trees growing or they may stagnate. Once a stand stagnates it may not be able to respond to thinning in the future. Four acres of sandhill longleaf forest type would not be lost because a helispot would not be designated at this time.

The main action in alternative C that would affect vegetation is prescribed burning. The burning prescribed in alternative C would be done primarily in the winter months of the year with the objective of reducing the amount of fuel on the forest floor. Winter burning does not kill as much woody vegetation as growing season burning. So a cumulative effect of burning in the winter months only would be to allow the encroachment of woody vegetation into these fire dependent communities. This encroachment of woody vegetation would eventually change and reduce the plant diversity of the community.

Under the no action alternative, ground cover conditions in stands 11 and 80 and the vegetation around the potential Flatwoods salamander ponds would remain the same and get worse over time as more and more woody vegetation encroached and additional groundcover is lost.

Cumulative effects share the same time and location. Although most of the analysis area will not be treated at the same time some timeframes may overlap and some of the potential effects of those actions may overlap, but it is not anticipated that any of these effects would be significant on the vegetation.

Mitigation measures imposed to help reduce potential environmental impacts of herbicide application:

- *The guidelines for planning and applying herbicides contained in the Vegetation Management Environmental Impact Statement would be followed (Veg. Mgmt. FEIS 1989)*
- *An Emergency Spill Plan would be developed to minimize hazards to people and natural resources in the event of an accident.*

The following mitigation measure would apply to Alternatives A and B to reduce the chance of spreading exotic plants:

- *Timber sale, road construction, and site preparation contracts would contain Equipment Cleaning clauses to prevent the introduction of exotic plants.*

Management Indicator Species (MIS) Plants

Overview

Monitoring, evaluation, and research are the heart of adaptive management. Monitoring, in particular, is the quality control mechanism for the Forest Plan. Forest managers are required to determine the effectiveness of Forest Plan direction in meeting desired habitat conditions and outcomes. One way to do so is to link management activities to species that can be efficiently monitored with a direct cause and effect relationship to those activities. Since it is not feasible to monitor effects on a large number of species, certain ones are chosen for their utility to indicate effects of management activities. Presence, absence, and/or population changes in these selected “management indicator” species (MIS) are believed to reflect management activity results. MIS identified in the plan and present on the Apalachicola National Forest (ANF) are *Aristida beyrichiana*, *Ctenium aromaticum*, *Harperocallis flava*, *Macbridea alba*, *Pinguicula ionantha*, *Scutellaria floridana*, *Sporobolus curtissii*, *Sporobolus floridanus*, *Sporobolus junceus*, and *Xyris stricta*.

The Forest Plan identifies these ten species as indicators for specific community types, six of which may be represented to varying extents within the Betsey Branch project area: *Aristida beyrichiana*, *Ctenium aromaticum*, *Sporobolus curtissii*, *Sporobolus floridanus*, *Sporobolus junceus*, and *Xyris stricta*. The remaining four (*Harperocallis flava*, *Macbridea alba*, *Pinguicula*

ionantha, and *Scutellaria floridana*) occupy well-defined habitats and are unlikely to be found in the analysis area. Below is a summary of all species and the rationale for their selection as MIS.

Wiregrass (*Aristida beyrichiana*): Groundcover dominance indicates good ecological health of savannas, bogs, seepage slopes, depression marshes, sandhills, mesic flatwoods, and wet flatwoods. Dominance depends upon frequent fires and lack of mechanical disturbance.

Toothache Grass (*Ctenium aromaticum*): Co-dominance of this long-lived perennial bunch grass indicates good ecological health of mesic to poorly drained flatwoods, bogs, savannas, depression marshes and the ecotones between pine flatwoods and wetlands. Population trends reflect fire frequency intervals and lack of mechanical disturbance.

Harper's Beauty (*Harperocallis flava*): Presence indicates well-burned, ecologically healthy seepage slopes, bogs, and savannas.

White Birds-in-a-nest (*Macbridea alba*): Presence indicates good ecological health of mesic to poorly drained flatwoods. This plant is usually associated with the upper ecotones between the longleaf pine/wiregrass community and adjacent wetlands.

Godfrey's Butterwort (*Pinguicula ionantha*): Presence indicates good ecological health of strand swamps, dome swamps, and ecotones between these communities and adjacent wiregrass dominated savannas and flatwoods.

Florida skullcap (*Scutellaria floridana*): Presence indicates well-burned, ecologically healthy seepage slopes, bogs, savannas, and depression marshes.

Curtiss Dropseed (*Sporobolus curtissii*): Presence of this long-lived perennial bunch grass indicates ecological health of mesic to poorly drained flatwoods. Population trends reflect fire frequency intervals and lack of mechanical disturbance.

Florida Dropseed (*Sporobolus floridanus*): Presence of this long-lived perennial bunch grass indicates well burned, ecologically healthy mesic to wet flatwoods, bogs, seepage slopes, savannas, and depression marshes that have not been mechanically disturbed.

Pineywoods Dropseed (*Sporobolus junceus*): Co-dominance of this long-lived perennial bunch grass (with *Aristida beyrichiana*) indicates ecological health of moderately to well-drained longleaf pine/wiregrass communities.

Pineland Yelloweyed Grass (*Xyris stricta*): Presence/co-dominance indicates ecological health of cypress ponds and strands. Population trends reflect fire frequency intervals.

Trend Data

In 1996, as part of an ecosystem classification project, the National Forests in Florida entered into a contract with the University of Florida to establish permanent vegetation monitoring plots on the five districts. Data was to be taken from these plots on soils and vegetation. Beginning in 1997, 101 Land Type Association (LTA) plots were established on the ANF, 50 on the Apalachicola Ranger District (ARD) and 51 on the Wakulla Ranger District (WRD).

In 2000, those plots with recorded occurrences of MIS plants were identified and the decision was made to use data obtained from these LTA plots to track MIS species trends also. To date, five of the above listed MIS species have been documented on 43 of the 50 plots on the ARD (*Aristida beyrichiana*, *Ctenium aromaticum*, *Sporobolus floridanus*, *Sporobolus junceus* and *Xyris stricta*). Four of the above listed MIS species have been documented on 30 of the 51 plots on the Wakulla District (*Aristida beyrichiana*, *Ctenium aromaticum*, *Sporobolus floridanus*, and *Sporobolus junceus*). Meaningful trend information is not yet available since these plots have been sampled only once. Baseline data for all MIS species can be found in the *2008 Annual Monitoring and Evaluation Report for the National Forests in Florida*.

In addition to these LTA plots, twelve plots (three per species) were established for the federally listed MIS plants *Harperocallis flava*, *Macbridea alba*, *Pinguicula ionantha*, and *Scutellaria floridana*. Initial data was collected from all of these plots and they have been revisited anywhere from 4-6 times each.

More recently, the Florida Natural Areas Inventory (FNAI), the Forest Service, and Dr. Doria Gordon of The Nature Conservancy jointly developed methods for monitoring the four federally listed threatened and endangered (T&E) plants. This monitoring methodology was designed to provide the Forest Service with an easy method of tracking T&E presence, status, and population trends. FNAI aided the District Ecologist, Louise Kirn, with monitoring and survey for new populations of these species in the spring and summer of 2007. All data collected under this contract were incorporated into the FNAI Rare Species Conservation Database in the form of Element Occurrences (EOs). A total of 77 EOs were either updated or generated from data collected during this survey. Recommendations offered in the final report (USFS: Rare Plant Monitoring Apalachicola National Forest, September 2007) are intended to guide future annual monitoring of T&E species by Forest Service field staff. Trend data is not available as of yet.

Environmental Effects

Alternative A

The action alternative may contribute to improving MIS plant habitat. Thinning pine stands, as well as herbicide application and mechanical methods to control vegetation have been common practices in the past. Each MIS evolved in the longleaf pine-wiregrass community and require an open habitat, with high light conditions and minimal competition. The risk remains that individuals may be crushed, broken, uprooted, buried or otherwise impacted during the proposed management actions - clearcutting, thinning/group selection cut, mulching, mechanical site preparation, firebreak creation, and herbicide application. Loss of individuals may occur.

We should expect to see positive trends resulting from implementation of this alternative as the desired future condition for the entire Forest is attained. It is unlikely a measurable difference would be realized due to this one project. The effects of this and other ongoing and future projects that restore the open pine system could influence MIS plants in a noticeable way but these would be long-term changes.

Alternative B

The differences between Alternative A and B are the methods used to establish and release longleaf pine--Alternative B uses prescribed fire as the primary vegetation management tool versus herbicide/mechanical roller chopping. Direct impacts described above will be lessened, however there are tradeoffs. On sites with abundant residual hardwoods, prescribed burning by itself has had mixed success in competition control or debris reduction. MIS plants require open habitat, with high light conditions and minimal competition. Loss of individuals may occur.

As above, we should expect to see positive trends resulting from implementation of this alternative as the desired future condition for the entire Forest is attained.

Alternative C

The no-action alternative will have a negative effect on MIS species and will result in a decreasing trend. Vegetative changes would be limited to those resulting from natural phenomena and prescribe burning. The opportunity would be lost to thin dense slash pine (some of which were planted on historic savannas) and initiate uneven-aged management. The native groundcover will continue to lose vigor and may over time eventually vanish.

T&E Plant Species

A Biological Evaluation (BE) was prepared to determine the effects of the Betsey Branch project alternatives on Proposed, Endangered, Threatened and Sensitive Plants (PETS) plants and/or their habitat. The table below summarizes the determinations for the PETS plants. See the biological evaluation in Appendix B of this document for more detail.

Table 9 TES Plant Effects Summary, Betsey Branch Analysis, August 2008

SPECIES or ASSEMBLAGES	ALT A	ALT A CUM	ALT B	ALT B CUM	ALT C	ATL C CUM
Harperocallis flava *	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
Macbridea alba *	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
Scutellaria floridana*	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
Pinguicula ionantha*	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
Sandhills	May Impact Indv.	May Impact Indv.	May Impact Indv.	May Impact Indv.	No Impact	May Impact Indv.
Mesic-Wet Flatwoods	May Impact Indv.	May Impact Indv.	May Impact Indv.	May Impact Indv.	No Impact	May Impact Indv.
Strands, Cypress Ponds, Swamps	May Impact Indv.	May Impact Indv.	May Impact Indv.	May Impact Indv.	No Impact	May Impact Indv.
Savannas, Bogs, Seepage Slopes	May Impact Indv.	May Impact Indv.	May Impact Indv.	May Impact Indv.	No Impact	May Impact Indv.
Pond, Lake Margins	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
Aquatic	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
Slope, Hardwood Forest	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
Bluffs	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
River/Streambanks	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
Floodplains	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact

* US Fish and Wildlife Service Endangered or Threatened

Management Indicator Species (MIS) Wildlife

Affected Environment

The general wildlife community that occurs in these compartments is typical of the southern Coastal Plain. Because it would be infeasible to monitor the effects of management on all wildlife species, certain species were chosen to be “management indicators”. Management indicator species (MIS) are selected to monitor the effectiveness of the Forest Plan direction in meeting the desired habitat conditions and plant/animal outcomes. Population changes in these selected species are believed to indicate the effects of management. The MIS chosen for discussion with this project are the red-cockaded woodpecker (RCW) and bobwhite quail. The Forest Plan identifies these two species as indicators for sandhill, scrubby flatwoods, mesic flatwoods, or wet flatwoods community types.

Red-cockaded Woodpecker (*Picoides borealis*)

The RCW is listed as a Federally endangered species and was also chosen by the National Forests in Florida as a MIS. In the Betsey Branch analysis area there are two inactive clusters within ½ mile of a treatment (310.01 and 310.03). All the treatment stands within ½ mile of 310.01 are younger than 30 years of age. Four treatment stands are within the ½ mile circle of cluster 310.03. Two of the proposed offsite pine conversion clearcuts are within or partially within this ½ mile circle; these stands are 33 and 41 years of age. The other two treatment stands within the circle are over 60 years of age and are proposed for thinning (See Biological Evaluation).

The latest GIS database of the ANF shows there are 499 active and 160 inactive clusters on the Apalachicola District and 130 active and 213 inactive on the Wakulla District. A random sample of clusters has been chosen and monitored since 1992. This sampling, along with other forms of monitoring, indicates a stable population on the Apalachicola District and a recent small increase on the Wakulla District. For more detail on the ANF's monitoring and results see Ruhl 2000, updated periodically by Hess, available from the Apalachicola District office.

Alternative A

The removal of the timber would move the stand structures more toward that described in the RCW Recovery Plan (USDI, 2003). Thinning along with prescribed burning, may improve the habitat enough to increase the capability of the area to support more RCW groups. The conversion of off-site and poor growing pine to longleaf pine would also add to future habitat. Two of the clearcuts are within a ½ mile of an inactive RCW cluster therefore at this time would have no direct impact on an RCW group's foraging. It is highly unlikely that RCWs would be exposed to the proposed herbicide use; the stands are more than ½ mile from any active cluster. Clearcuts or very young pines are not a habitat component that RCWs typically use.

Achieving this desired habitat improvement is a long-term process and the proposed project would be just one step in that process. An increase in overall RCW breeding groups in this area and on the Forest would be an indication of the positive effects of management, not only timber management but prescribed burning as well.

Alternative B

The only differences between Alternative A and B are the methods used to establish and release longleaf pine. This alternative would use prescribed fire instead of herbicide and roller chopping. Any potential impacts on RCWs should not be much different.

Alternative C

The No Action alternative would not have an immediate, direct impact on RCWs but it also would not contribute toward improving habitat for the eventual growth of the population. The absence of timber management may lead to a decline of RCW breeding groups not only in this area but also throughout the Forest. RCWs thrive in open pine stands and burning alone may not achieve the desired future condition (USDA 1995, USDI 2003).

Northern Bobwhite (*Colinus virginianus*)

The bobwhite quail is a popular game species and serves as an indicator species for sandhill and flatwoods communities on the National Forests in Florida. Breeding Bird Survey (BBS) data indicate low densities statewide. BBS counts and R8 bird point data for the Forest show the northern bobwhite at low and variable densities and trends difficult to determine (2006 Annual Monitoring and Evaluation Report, National Forests in Florida). This type of monitoring is planned to continue.

Alternative A

The action alternative may contribute to improving habitat for the bobwhite quail. Thinning pine stands, herbicide application and mechanical methods to control vegetation are common practices used in quail management. Like RCWs, bobwhites prefer open, well-burned pine stands. It is unlikely a significant population difference would be realized due to this one project. The effects of this and other ongoing and future projects that restore the open pine system could influence quail numbers in a noticeable way but these would be long-term changes. We would expect to see an increase in quail as the desired future condition for the entire Forest is attained.

Alternative B

The only differences between Alternative A and B are the methods used to establish and release longleaf pine. This alternative would use prescribed fire instead of herbicide and roller chopping. Any potential impacts on bobwhite quail should not be much different.

Alternative C

Under the no action alternative, bobwhite quail trends on the Forest would be expected to show no change or a decline. The continuation of prescribed burning alone may not improve habitat enough in these artificially dense stands. Prescribed fire is a necessary component of quail management but with the existing altered forest systems, application of fire only may not achieve Forest goals.

MIS not chosen for Betsey Branch Proposal:

Bald eagle – indicator for bottomland forest, floodplain, swamp, hydric hammock, baygall, strand swamp, basin swamp, dome swamp, and aquatic.

Florida black bear – generalist, too many other factors can affect population trends, too widespread, although probably would benefit as thinning and burning would increase the diversity of upland food plants and maintain a healthy system.

Large mouth bass – project is not in their habitat nor will it affect their habitat.

Pileated woodpecker – indicator for bottomland forest, floodplain, swamp, hydric hammock, baygall, strand swamp, basin swamp, dome swamp.

Prothonotary warbler - indicator for bottomland forest, floodplain, swamp, hydric hammock, baygall, strand swamp, basin swamp, dome swamp.

White-tailed deer and wild turkey – generalists, too many other factors including hunting and use of different habitat types, but would benefit from increased diversity of food and overall health of system.

Proposed, Endangered, Threatened and Sensitive Wildlife (PETS)

A biological evaluation (BE) was prepared to determine the likely effects of the alternatives on PETS animals and/or their habitat. The table below summarizes the determination. See the Biological Evaluation for more detail.

Table 10 Betsey Branch TS Summary of the Effects Determinations for Animals, Aug. 08

SPECIES	ALT A	ALT A CUM	ALT B	ALT B CUM	ALT C	ALT C CUM
*Gray bat	No Effect					
*Wood stork	No Effect					
*RCW	Not Likely	May Affect				
*Indigo snake	Not Likely					
*Flatwoods salamander	Not Likely					
*Gulf sturgeon	No Effect					
*Mussels	No Effect					
Sensitive aquatic	No Impact					
Sensitive terrestrial	May Impact	Beneficial	May Impact	Beneficial	May Impact	May impact

CUM = cumulative, over the long term

* US Fish and Wildlife Service Endangered or Threatened

Social-Economic Environment

Cultural Resources

All stands and roads, proposed for treatment, were inventoried for cultural and heritage resources during the spring of 2008. Surveys for cultural resources were conducted mostly in zones with high probability. Approximately ten percent of zones with low probability were evaluated within the analysis area. Surveys included both surface scan and subsurface testing. Stands 2 and 125 were too thick for a controlled grid testing. These stands are scheduled to be evaluated after the prescribe burn in Fiscal Year 2009. The surveys revealed four cultural resources sites that could be within the stands to be treated.

Alternative A

The proposed action alternative would not likely have an effect on the known cultural or heritage resource sites. The sites observed on the surface would be identified and avoided prior to timber harvest operations. However, there would be a potential to impact undiscovered sites in the analysis area. This potential is low because the areas with high probability were intensely surveyed. The surveys completed have increased the knowledge of archaeological resources.

The following coordination measures would be followed to protect cultural resources:

- *Known cultural resource site would be designated on the Sale Area Map and flagged on the ground. These areas would be avoided during the timber harvesting activities.*
- *Site identified on road segments by the Forest Archeologist would not be graded, ditched, or otherwise disturbed. Fill material may be placed on these sections.*
- *If any new sites are discovered, work would stop until this site is surveyed and mitigated by the Forest Archeologist.*

Alternative B

This alternative would have same effect as Alternative A. The potential to impact undiscovered sites would be less with prescribed burning site preparation method. There would be fewer passes of equipment on the ground surface.

Alternative C

The No Action Alternative would have no effect on cultural resources discovered. The opportunity to locate presently unknown sites within the project area would be lost.

The alternatives would not have any cumulative effects on cultural resources.

Visual Quality

The general principal for scenery management on the Apalachicola National Forest as a whole and for this project is that management activities should be in keeping with the scale, patterns and characteristics of the landscape being viewed (USDA, 1999). The effects of management activities would be visible to the public.

The scenery in the Betsey Branch Analysis Area is dominated by pine forestland. The longleaf and slash pine stands in the area have relative tall healthy trees with a brushy understory and short sight distance. When looking into these stands from a road, the viewer can see a short distance into the stand. Pine plantations contain tightly spaced trees of highly uniform height and rows, giving them a highly artificial appearance. The mature pine stands have a more natural, park-like experience with trees of variety heights and diameters, including some large trees. The understory in these stands has a longer sight distance. These areas are typically the most aesthetically pleasing to forest visitors.

The visual quality objectives of the analysis area range from maximum modification to retention. These designations are based on distances from points of interest, such as developed recreation areas, heavily traveled recreation roads, or wilderness areas. The Bradwell Bay Wilderness Area is a half-mile to the southeast corner of the analysis area.

Alternative A

Timber harvesting, herbicide application and mechanical site prep would have the greatest impact on visual appearances. During the timber harvesting operations, some vegetation would be bent over and/or crushed as trees are removed from the stand causing some browning of the vegetation. Treetops and logging slash left in the stand would also turn brown. The following slash treatment zones would be applied:

- *All logging debris within 200 feet of Maintenance Levels 5 and 4, formerly Traffic Service Levels A and B, County Road (CR) 375 and Forest Road (FR) 309 would be lopped and scattered within 2 feet of the ground.*
- *No herbicide would be applied within 100 feet of private land or 300 feet of a private residence, unless the landowner agrees to closer treatment.*
- *Notice signs (FSH 7109.11) are clearly posted, with special care taken in areas of anticipated visitor use.*

These zones will help minimize the effect of the timber harvesting operations. Mechanical site preparation would chop and flatten the remaining brush making the area appear larger and open. Timber harvesting and mechanical site prep will greatly improve the sight distance in the stand and increase the opportunities for wildlife viewing.

In applying herbicides, blue dye would be used to identify treated areas. The blue dye would temporarily detract from the visual appearance. The browning of the targeted vegetation would occur about two to three weeks after the herbicide application for site preparation. The brown leaves would remain on some branches until the winter months.

The forest is a dynamic place, always changing from date to day, and so are its visual resources. The visual resources would continue to transform whether the forest is managed or unmanaged.

Young plantations would grow into mature forests; therefore, causing its visual appearance to change.

Alternative B

In this alternative, the effects would remain the same with the exception of the effects of mechanical site prep. Prescribed burning would blacken the understory vegetation, and possibly the residual trees. The effects would reduce woody species components and encourage tender, green herbaceous vegetation to grow. This action would also increase the sight distance and opportunities for wildlife viewing. Prescribed fire effects on visual quality are disclosed in the Final Environmental Impact Statement prepared for Vegetation Management in the Coastal Plain/Piedmont Volume 1, Page IV-116.

Alternative C

In this alternative, visual quality would be improved with prescribed burn only. Prescribe burning would improve visibility for forest users traversing through the woods by controlling the understory vegetation, maintaining Prescribe burning operations may leave burn scars on the base of the trees and would cause temporary browning of the vegetation. The routine road maintenance and landline maintenance would have no effect.

Recreation

The recreation opportunities that are available to the public in this analysis area include, but are not limited to, camping, fishing, hunting, picnicking, recreational driving, and wildlife viewing. Of these recreation uses, hunting and recreational driving are the most common activities. Bradwell Bay Wilderness Area, the closest roadless area, is southeast of the analysis area. The desired set of experiences offered in or adjacent to these areas are classified as roaded natural or semiprimitive motorized in the Recreation Opportunity Spectrum (ROS). Roaded Natural classification has probability to experience some affiliation with other types of activities more common to the recreation experience but does not imply that management techniques would not be the seen or heard. This spectrum is a USDA Forest Service management approach for recognizing possible combinations of recreation activities, settings and probable experience opportunities.

Alternative A

This alternative would temporarily detract from the “natural setting and serenity” of the area. Restoration cuts (clearcuts), thinnings, group selections and prescribed burning of the pine over-story would encourage growth and blooming of the groundcover vegetation. Some of the under- and mid-story vegetation would be removed, improving the sight distance. Hunter success would increase with an open understory and improved access. Temporary detractions of logging equipment could be an offset to visually appealing. Logging traffic would temporarily increase on the arterial road in the analysis area.

The interaction with the haul routes as a result of timber harvesting may cause an inconvenience on recreational user if they are present when the logging operations are in progress. The equipment operators and drivers will be notified to watch for any users in the area.

The proposed treatments may have a temporary effect on the quality of the user's recreational experience in the area of the proposed effect. Wildlife viewing and hunter success may be reduced for a short time due to noise created from the proposed activities. This temporary effect can not be avoided with this alternative. The area of proposed effect is less than or equal to one percent of the forest.

Thinning and prescribe burning would be beneficial to many forms of recreation, due to easier access through the stands. The over-all maintenance of the forest in an open park-like condition would be beneficial over the long term. There should be no cumulative effects of this alternative on recreation opportunities unless a new form of recreation is developed that is incompatible with these actions. These actions would have no effect on the Bradwell Bay Wilderness Area.

Alternative B

Under this alternative, the effects would be the same as Alternative A.

Alternative C

The no action alternative would allow natural processes to continue, including canopy crown closure and suppression of the groundcover. Without thinning, the young pine plantations would become thicker and more shaded. The recreation experience would decrease over time and the forest composition and character would change to a thick, brushy understory. Hunting and wildlife viewing would also decline as the stands become thicker.

Transportation System

There are approximately 27.7 miles of roads in the Betsey Branch Analysis Area. The roads are categorized in maintenance levels 1, 2, 3, 4 and 5. The main travel arteries in the area are Forest Roads (FR) 309, 314, 355, and State Highway 375. Most of the woods roads are made of native surface material. These woods roads are only maintained if a problem, such as erosion, occurs.

Table 11: Miles of Road by Maintenance Level

Maintenance Level	Description	Miles
1	Basic Custodial Care (Closed)	0.9
2	High Clearance Vehicles	21.3
3	Suitable for Passenger Cars	1.8
4	Moderate Degree of User Comfort	0.4
5	High Degree of User Comfort	3.3
Total		27.7

On October 1, 2008, the Apalachicola National Forest implemented the Decision on Access Designation, in which motorized and non-motorized use were restricted to specific roads and trails. There are no mixed-use roads or trails in the Betsey Branch Analysis Area.

Alternative A

The proposed action would affect the roads in the same manner as general traffic. In this alternative 5.2 miles of forest roads would be reconstructed and 8.2 additional miles maintained. As a result, the proposed action would decrease soil erosion, prevent or decrease loss of resources, improve access on lower maintained road within the analysis area. Firebreaks may increase the potential for motorized travel. Law enforcement officer would regulate violator of the Access Designation. Landline maintenance would have no effect on the transportation system.

Alternative B

This alternative would have the same effect as Alternative A. There would cause an increase of smoke on the travel ways as a result of prescribed burn for site prep; causing a temporary decrease in visibility in the surrounding area.

Alternative C

In the No Action Alternative, the arterial roads in the analysis area would only be maintained. Soil productivity, loss of resources, and the condition of the road surface would continue to decrease.

Economics

The proposed action would take place in the northwest portion of Wakulla County, Florida. This county is a rural community. Many of its residents work for state or government agencies in the Tallahassee area. Very little of the income generated in the county is a direct result of the National Forest. The sale and harvesting of timber on the Apalachicola National Forest historically produced funds, a portion of which was returned to the county in lieu of taxes to be used for schools and roads. On October 30, 2000 the president signed the Secure Rural Schools and Community Self-Determinations Act of 2000 (Public Law 106-393). This legislation ends rural communities' historic dependence on National Forest receipts to finance school and road construction. Under this act, affected counties in the National Forests in Florida elected to receive their share of the average of the three highest 25 percent payments made to the state during the period FY 1986 through FY 1999. This payment plan will continue through the year 2008.

Environmental Effects: Alternatives A and B would offer pine sawtimber and pulpwood products for sale and perform maintenance and reconstruction work on forest system roads. The table below compares these action alternatives from a financial standpoint, using preliminary cruise data and fiscal year 2008, 3rd quarter base prices. The actual revenue generated by a timber sale would be computed using final cruise data, bid prices, and costs current at the time of

the sale. This is a very simple economic analysis comparing values of tangible items. There are several intangible items such as recreation opportunities, people’s value judgments, or how many more people would use a road because it is reconstructed. These types of values are speculative at best and are not included in this analysis.

The net value of Alternatives A and B would produce a mixture of sawtimber and pulpwood for the local timber market. These alternatives have a positive net value when compared to the outputs of the no action alternative.

Alternative C would not contribute to the economy of Wakulla County or surrounding counties in the form of revenues and the cost of the normal prescribe burning and road maintenance would cause this alternative to have a negative net value.

Table 12: Revenue Returned to Counties

County	Secure Rural Schools and Community Self Determination Act	Payment in Lieu of Taxes
Franklin	\$25,527	\$22,379
Leon	\$120,898	\$102,518
Liberty	\$307,964	\$265,029
Wakulla	\$195,13	\$168,602

Source: 2002 Forest Facts FY-2000, National Forests in Florida

Table 13. Economic Efficiency of Alternatives

Base Year 2010
 Inflation Rate 0.022

Revenues:

Product	Units	Value/Unit	Year Planned	Alternative A		Alternative B		Alternative C	
				Units Planned	Inflated Benefits	Units Planned	Inflated Benefits	Units Planned	Inflated Benefits
Sawtimber	CCF	\$129	2010	327	\$42,121	327	\$42,121	0	\$0
Pulpwood	CCF	\$20	2010	3,027	\$60,146	3,027	\$60,146	0	\$0
Total				3,354	\$102,267	3,354	\$102,267	0	\$0

Costs:

Action	Units	Cost/Unit	Year Planned	Alternative A		Alternative B		Alternative C	
				Units Planned	Inflated Costs	Units Planned	Inflated Costs	Units Planned	Inflated Costs
Road Reconstruction	Miles	\$13,904	2010	5.20	\$72,300	5.2	\$72,300		\$0
Road Obliteration	Miles	\$20,362	2010		\$0		\$0		\$0
Site Prep Burn	Acre	\$25	2010	91	\$2,275	91	\$2,275		\$0
Site Prep - Garlon	Acre	\$210	2010	91	\$19,155	0	\$0		\$0
Site Prep - Chop	Acre	\$170	2010	8	\$1,360	0	\$0		\$0
Gyro trac	Acre	\$400	2010	0	\$0	0	\$0		\$0
Hand Plant Longleaf	ACF	\$298	2012	91	\$28,365	91	\$28,365		\$0
1st Year Check	Acre	\$15	2013	91	\$1,457	91	\$1,457		\$0
3rd Year Check	Acre	\$15	2015	91	\$1,522	91	\$1,522		\$0
Plant Wiregrass Plug	Acre	\$805	2010	0	\$0		\$0		\$0
Broadcast Wiregrass	Acre	\$361	2010		\$0	0	\$0		\$0
Drill Start Holes	Each	\$52	2010		\$0		\$0		\$0
Brownsport Burn	Acre	\$25	2010		\$0		\$0		\$0
Prescribe Burn CUV	Acre	\$25	2010	0	\$0	0	\$0		\$0
Fuel Reduction Burn	Acre	\$25	2010		\$0		\$0	5,550	\$138,750
Trash Pile Clean up	Each	\$650	2010		\$0		\$0		\$0
Road Closure	Miles	\$5,000	2010		\$0		\$0		\$0
Total					\$126,434		\$105,919		\$138,750

Summary:

Action	Units	Calculation	Alternative A	Alternative B	Alternative C
Benefits	Dollars	Total Revenues	\$102,267	\$102,267	\$0
10% Roads and Trail	Dollars	10% * Total Revenue	\$10,227	\$10,227	\$0
Return to Treasury	Dollars	.25/CCF	\$839	\$839	\$0
Action Costs	Dollars	Total Costs	\$126,434	\$105,919	\$138,750
Net Worth	Dollars		-\$25,005	-\$4,490	-\$138,750

If we apply the IMPLAN response coefficients used in the EIS for the revised forest plan (EIS page B-65) the following table of impacts to jobs and income could be displayed for each alternative. It should be noted that the coefficients in the forest plan were for a ten-year planning period and have been divided by 10 for this calculation.

Table 14. Revenue and Jobs Created by Alternatives

This spreadsheet uses the coefficients in table B7 from the EIS on the Forest Plan to determine the number of Jobs and income generated by the timber produced in individual alternatives.

Base Year 2010
 Inflation Rate 0.02

Revenues:

Product	Units	Value/Unit	Year Planned	Alternative A		Alternative B		Alternative C	
				Units Planned	Benefits	Units Planned	Benefits	Units Planned	Benefits
Sawtimber	CCF	129.00	2010	327.00	\$42,183	327.00	\$42,183	0.00	\$0
Pulpwood	CCF	20.00	2010	3027.00	\$60,540	3027.00	\$60,540	0.00	\$0
Total				3354.00	\$102,723	3354.00	\$102,723	0.00	\$0

Action	Units	Value/Unit	Year Planned	Alternative A		Alternative B		Alternative C	
				Units Planned	Jobs	Units Planned	Jobs	Units Planned	Jobs
Jobs from Sawtimber	MMCF	9.35	2010	0.03	0.31	0.03	0.31	0.00	0.00
Jobs from Pulpwood	MMCF	11.31	2010	0.30	3.42	0.30	3.42	0.00	0.00
Total Jobs					3.73		3.73		0.00

Action	Units	Value/Unit	Year Planned	Alternative A		Alternative B		Alternative C	
				Units Planned	Dollars	Units Planned	Dollars	Units Planned	Dollars
Income from Sawtimber	MMCF	0.37	2010	0.03	0.01	0.03	0.01	0.00	0.00
Income from Pulpwood	MMCF	0.43	2010	0.30	0.13	0.30	0.13	0.00	0.00
Total Income MM\$					0.14		0.14		0.00

Total Income \$		\$141,720.00		\$141,720.00		\$0.00
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Environmental Justice & Civil Rights Impact Analysis

The population for the four counties (Franklin, Leon, Liberty, and Wakulla Counties) containing the Apalachicola National Forest lands have continued to expand at the same rate as the state, except for Leon and Wakulla Counties. This growth is expected to continue and as indicated in the Southern Forest Resource Assessment, unlike the population growth of the 1950s through the 1980s when the population of rural areas contracted while urban areas expanded. The growth between 1990 and 2007 was spread across nearly every county in the region. As a result, the population density near rural forests has expanded and these four counties progress to urbanization.

Table 15: Estimated Population Growth, 1990, 2000, 2007

State or County	1990	2000	2007	Percentage of Change 2000-2007
State of Florida	12,937,926	15,982,824	17,516,732	9.6
Franklin County	8,967	9,829	10,649	8.3
Leon County	192,493	239,452	263,896	10.2
Liberty County	5,569	7,021	7,354	4.5
Wakulla County	14,202	22,863	29,726	30

Source: 2004 Florida Statistical Abstract, Table 1.16 (Bureau of Economic and Business Research, College of Business Administration, University Press of Florida).

Demographics of the Betsey Branch Analysis Area were reported in the US Census Bureau for Wakulla County. In the 2007 Population Estimates, Wakulla County has a population increase by 30% since Year 2000. Approximately 85.1% of the people are White, 13% are Black, and less than 2% represents other races.

All alternatives rate the same for this subject area. None of the actions proposed by any of the alternatives should have any negative affects on the Civil Rights of the citizens of Wakulla County or the surrounding area. No minorities would be discriminated against because of the proposed actions in these alternatives. No groups of people would be disproportionately affected as a consequence of the proposed action. All labor contracts generated from the proposed action would have clauses, which prohibit discrimination for any reason. There are no foreseeable changes in the management of the forest or surrounding private lands that would adversely affect the Civil Rights of people in the future.

CONSULTATION AND COORDINATION

The Forest Service consulted the following individuals, Federal, State, and local agencies, tribes and non-Forest Service persons during the development of this environmental assessment:

ID TEAM MEMBERS:

Andrea Repp, Archaeologist
Pat Lovejoy, Engineer
Louise Kim, Ecologist
Gary Hegg, Silviculturist
Susan Fitzgerald, Wildlife Biologist
Steve Parrish, Fire Management Officer
Sonja Durrwachter, Timber Management Officer
Chandra Roberts, Forester/NEPA Planner (IDT Leader)

FEDERAL, STATE, AND LOCAL AGENCIES:

Florida State Division for Forestry
Florida State Division of Historical Resources
US Fish and Wildlife Service

TRIBES:

Kialegee Tribal Town	Miccosukee Indian Tribe
Mississippi Band of Choctaw Indians	Choctaw Nation of Oklahoma
Chickasaw Nation	Alabama-Quassarte Tribal Town
Seminole Tribe of Florida	Seminole Nation of Oklahoma
Poarch Creek Indians	Muscogee (Creek) Nation

OTHERS:

Adjacent Land Owners
Apalachicola National Forest Interested Public Mailing List

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Appendix A

Public Involvement

Public Comment Summary – Betsey Branch Analysis Area and Related Areas

Review: _____
 Interdisciplinary Team Leader _____
 Date

Approval: _____
 Deciding Official _____
 Date

This document shows the comments we received from the public in response to our scoping efforts and how those comments were addressed.

Public Scoping Announcements and Dates

Scoping Document	Date of Document	End of Comment Period	Comments Received
Schedule of Proposed Actions	October 1, 2007	N/A	
Initial scoping legal notice	December 28, 2007	January 14, 2008	4
Schedule of Proposed Actions	January 1, 2008	N/A	
Schedule of Proposed Actions	April 1, 2008	N/A	
Schedule of Proposed Actions	July 1, 2008	N/A	
Schedule of Proposed Actions	October 1, 2008	N/A	
Schedule of Proposed Actions	January 1, 2009	N/A	
Schedule of Proposed Actions	April 2, 2009	N/A	
Notice and Comment Period and Draft EA Review	January 14, 2009	February 16, 2009	1
DN & FONSI/Appeal Period	April 27, 2009		

Significant issues are defined as actual and perceived effects, risks, or hazards related to the proposed action. Non-significant issues are defined as general concerns not related to the current proposed action’s effects, and therefore, can not be resolved through an alternative or mitigation. The Interdisciplinary Team reviewed the public scoping comments and determined that the comments were not significant in the cause-effect relationship to the proposed action.

Date Rec. Standing?	Who Commented?	Issues, Concerns, and Opportunities	How Were the Comments Addressed?
Jan. 14 (2008)	Terry Sehler, Adjacent Landowner	<ol style="list-style-type: none"> What is the proposed width of the firelines? Is the proposed action on private or National Forest land? We’ve had problems in the past with the public driving through our property to access to forest. Can you advise or help us to protect our property in the event of a wildfire? 	<ol style="list-style-type: none"> The Forest Service is proposing to create a 25-foot (width) firebreak, or fireline, along the National Forest boundary or to the nearest existing fireline. This issue was resolved by the landowner installing the gate. Therefore, it is outside the scope of the proposal. The proposed fireline, or firebreak, would serve as a control line to reduce the occurrence of fire spread from National Forest to private or from private to the National Forest. Florida Division of Forestry has a <i>Firewise</i> program designed assist private landowners in fire protection.
Jan. 14 (2008)	Brett Paben, Staff Attorney WildLaw	The map shows uneven-aged management proposed for stands 31, 54, and 72: <ol style="list-style-type: none"> The treatment table does not 	<ol style="list-style-type: none"> Uneven-aged management is the application of a combination of actions needed to simultaneously maintain continuous high forest cover, recurring regeneration of desirable

Date Rec. Standing?	Who Commented?	Issues, Concerns, and Opportunities	How Were the Comments Addressed?
		<p>describe the activities</p> <ol style="list-style-type: none"> 2. These stands should have the proper proportion of mature longleaf pine and adequate herbaceous groundcover to carry fire after harvest. 3. Opening should not be uniform and range between the ¼ and 2 acres <p>Herbicide Application:</p> <ol style="list-style-type: none"> 4. Due to the proximity of the various streams in the analysis area, we are concerned about the application of toxic chemicals to these stands. 5. In addition to considering the alternative without herbicide applications, the proposal should be written to provide direction under which weather and moisture conditions applications would be allowed. <p>Mechanical Site Preparation:</p> <ol style="list-style-type: none"> 6. What conditions in stands 8 and 26 makes mechanical site prep necessary? <p>Maximum Tree Diameter for Harvest:</p> <ol style="list-style-type: none"> 7. The maximum size for longleaf pines harvested should be 13” dbh, and you should clearly articulate what 13” means. <p>Helispot:</p> <ol style="list-style-type: none"> 8. What is the purpose for the helispot? <p>Roads:</p> <ol style="list-style-type: none"> 9. You should make it standard practice to implement Route Destination Plan in these site-specific projects, the Route Designation Plan indicated you would. 	<p>species, and the orderly growth and development of trees through a range of diameter classes to provide a sustained yield of forest products. Cutting is usually regulated by specifying the number of proportion of trees of particular sizes to retain within each area, thereby maintaining a planned distribution of size classes. A detailed description of the cutting method would be included in the Silvicultural Prescription, Appendix E.</p> <ol style="list-style-type: none"> 2. The ID Team reviewed these stands in the field and agreed that they meet the criteria of the forest plan. 3. The opening size is a standard and guideline in the Forest Plan. The comment deals with implementation and is irrelevant to the decision to be made 4. Hexazinone is a chemical that is listed as low-toxicity. There are <i>Silviculture Best Management Practices for Florida</i> in place to protect stream courses that would be included as a mitigation of the proposal. 5. An additional alternative will be analyzed in the EA. 6. Stand 26 is no longer part of the proposal. Stand 8 has vegetation too tall for safe foliar treatment with herbicides therefore mechanical treatment was proposed. 7. The guidelines established in the 2003 Recovery Plan for the Red-Cockaded woodpecker would be included in the EA, BE, and the Silvicultural Prescription. 8. The purpose and need for the helispot is to provide a landing place for helicopters to service the Smith Creek Community and Bradwell Bay Wilderness during wildfire and prescribe burning operations. 9. Thank you for your comment.
<p>Jan. 15 (2008)</p>	<p>Julie Sehler, Adjacent Landowner</p>	<ol style="list-style-type: none"> 1. Concerned about the drift from the herbicide release proposed in stand 82. The property was purchase to potentially farm and they don't want any herbicides on their property. 2. Thinning would increase visibility and reduce privacy. 3. Her safety is being compromised if the forest is heavily thinned. 4. Are the two landings adjacent to the property permanent or temporary? 	<ol style="list-style-type: none"> 1. The Forest Service herbicide application requirement allows application of herbicides with less than 8 MPH winds. They also restrict application of herbicides within 100 feet of private property and 300 feet of a private residence. 2. The thinning operations proposed are needed to manage the resources in the National Forest. 3. There are rules and regulations for hunting around private property. 4. Log landings are temporary during the logging operations and are usually adjacent to access roads.

Date Rec. Standing?	Who Commented?	Issues, Concerns, and Opportunities	How Were the Comments Addressed?
Jan. 17 (2008)	Steve Terry NAGPRA & Section 106 Representative Miccousukee Tribe	<p>One of those landings appears to be in the road.</p> <p>1. Our concern is that the archaeological sites located within this area be protected. No disturbance of these sites should be contemplated.</p>	<p>1. Thank you for your comments. This issue is already determined by law.</p>
Feb. 3 (2009) Yes.	Brett Paben, Staff Attorney WildLaw	<p>Uneven-aged Management:</p> <p>1. When implementing modified group selection that the openings actually range from ¼ to 2 acres, as required by Forest Plan Standard VG-13.</p> <p>Helispot: Please analyze the alternatives for the helispot.</p> <p>2. How far away is the nearest existing helispot and dip site that are currently used to service the Smith Creek Community and Bradwell Wilderness during wildfire and prescribe burning operations?</p> <p>3. How much flight time would this new helispot and dip sight save?</p> <p>4. How much fuel will this save the FS on an annual basis?</p> <p>5. We are concerned that you are not utilizing the alternatives analyzes requirements of NEPA to help determine if there are other options to accomplish the same objective – protecting the Smith Creek Community.</p> <p>Road Decommission/Returning to Resource Production:</p> <p>6. There are numerous other road segments – at least 25 – that are not on the Apalachicola’s MVUM and thus no longer part of the Apalachicola National Forest system that you need to decommission. When these maps are compared to the No Action Alternative from the Access Plan or MVUM (Map A), most – if not all – of these roads were unauthorized roads, which, by definition, means these roads are not forest roads or trails or a temporary roads</p>	<p>1. The Silvicultural Prescription would include directions to implement UEAM which coincide with Standard VG-13 of the Forest Plan.</p> <p>2. The nearest Helispot #9 is 2.25 miles away, and the nearest designated dip site, W19 is 1.25 miles away. The proposed helispot would consist of four acres an off-site slash stand. In this stand, the Forest Service proposes to clearcut with reserves and plant longleaf. If a decision is made, four acres of would not be reforested and designated as a helispot.</p> <p>3. The proposed helispot is adjacent to a borrow pit. The borrow pit may be an alternate water source. The difference in flight time can be from 5 minutes as compared to up to 20 minutes from launch time to water source. Also, the Forest Service often has more than one Helicopter staged and this gives us another close proximity to Smith Creek. The quicker response time could mean the difference in saving someone’s house or life when wildfire threatens to the Smith Creek Community.</p> <p>4. The fuels savings would be difference between 10 minutes and 40 minutes from response time to refuel time. When lives or structures are at risk of loss, cost is insignificant; but the difference in the response time could be a matter of life and death.. This comment is irrelevant to the purpose and need.</p> <p>5. The purpose and need for the proposed 4-acre helispot was determined in collaboration with the local, county, state and federal entities. The location was determined by the Forest Service to be the best due to the proximity to the community, alternate water sources, and other helispots in order to service and/or protect the Smith Creek Community and the Bradwell Bay Wilderness Area in the event of a wildfire.</p> <p>6. The remaining roads which are unauthorized, or not open to the public, and not needed for Forest Service management may still be used by horse riders and hikers. Horseback riding and hiking are not limited to designated trail systems. Roads which are not receiving any use do not need any action because they will re-vegetate naturally.</p>

Appendix B

Biological Evaluation

Appendix C
Archeological Report

Appendix D

Engineering Report

Appendix E

Silvicultural Prescription

Appendix F

Emergency Spill Plan

